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Managing the Nation's Public Lands

Annual Report
of the U.S. Department of the Interior
Bureau of Land Management (BLM)

Fiscal Year 1991

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Managing the Nation's Public Lands

Fiscal Year 1991

This report to the Congress of the United States on the management of the Nation's public lands is submitted pursuant to the requirements of the Federal Land Policy and Management Act of 1976 (FLPMA) and covers the period from October 1, 1990, through September 30, 1991.

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Department of the Interior

Mission Statement

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally-owned public lands and natural and cultural resources. This includes fostering wise use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that they are managed in the best interests of all our people. The Department also promotes the goals of the Take Pride in America campaign by encouraging stewardship and citizen responsibility of the public lands and promoting citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. Administration.

Bureau of Land Management

Mission Statement

The BLM is responsible for the stewardship of our public lands. It is committed to manage, protect, and improve these lands in a manner to serve the needs of the American people for all times. Management is based on the principles of multiple use and sustained yield of our Nation's resources within a framework of environmental responsibility and scientific technology. These resources include recreation; rangelands; timber; minerals; watersheds; fish and wildlife; wilderness; air; and scenic, scientific, and cultural values.

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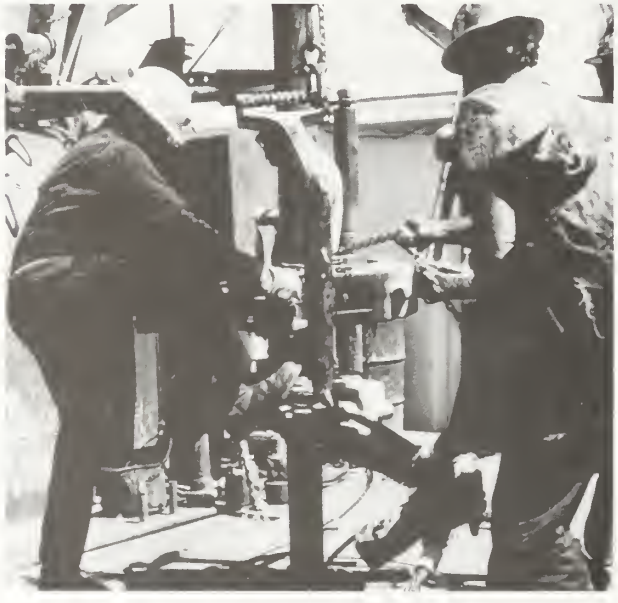
Introduction

The annual report of the Bureau of Land Management (BLM) for Fiscal Year 1991 reflects the continuing commitment to a balanced approach to land management which provides for the wise use of natural resources and a commitment to manage those resources in an environmentally responsible way for the benefit of future generations of Americans. This approach in 1991 has generated over $1 billion in revenues and assured thousands of jobs while at the same time realizing a new emphasis on the conservation of our Nation's resources.



The BLM generated over $1 billion in 1991, much of which went back to States and local economies.

The BLM's Energy, Minerals, Range, and Timber programs continued in 1991 to make significant contributions to the Nation's economy by generating income and providing leases, permits, and timber sales—and therefore jobs—to thousands of companies, small businesses, and family operations across the country.

The BLM's Energy and Minerals program alone generated over $1 billion in 1991 in bonus, rent, and royalty payments for oil and gas leases, geothermal energy, and coal production. Over half of this money is returned to the States, and to Native American Indians, and infused into local economies where it can be put to work on local needs such as better schools. Ranchers

using the public lands paid over $18 million to the Federal government for permits. Productive forest lands yielded $164 million in receipts to the Treasury and to local economies, which received about $97 million in 1991.

The BLM recommends addition of nearly 10 million acres to the National Wilderness System.

In addition, the BLM's forests are making another type of contribution to the American people that cannot be measured in dollars. In 1991, the agency responded to an urgent humanitarian need for a new anti-cancer drug, taxol, derived from the Pacific yew tree that is found in our forests in the Northwestern U.S. Taxol has been proven effective in the treatment of ovarian cancer and holds great promise for other types of cancer. The BLM began revising management plans and policy in anticipation of an unprecedented demand for taxol, and worked in cooperation with the National Cancer Institute to supply taxol for the clinical trials and research required for Federal Drug Administration approval.

Other accomplishments include inspections of *all* oil and gas leases on American Indian lands, and stricter bonding policies for proper reclamation of public lands. The BLM also began implementing a new approach to forest management called *Forests, Our Growing Legacy.*

The BLM manages forests containing the Pacific yew, an important source for the new anti-cancer drug, taxol.

Additionally, the BLM made recommendations to include close to 10 million acres of land in the National Wilderness System; launched a comprehensive initiative to restore 97 percent of riparian areas managed by the BLM; entered into over a dozen new partnerships to enlist support and cooperation in carrying out its goals; and opened up a number of new byways, trails, and other recreation sites to increase opportunities for Americans to enjoy the public lands. The BLM also dedicated the first burro

range to preserve this important part of our Western Heritage, and provided nearly 6,000 healthy wild horses and burros for adoption by American citizens across the country.

The theme of stewardship dominated many BLM activities in 1991, supporting President Bush's *America the Beautiful* Initiative and the Secretary of the Interior's emphasis on increased stewardship of America's resources. To this end, the BLM has aggressively implemented key initiatives and goals in the Rangeland, Fish and Wildlife, Riparian and Cultural Resources programs. Promoting the President's *Education 2000* Initiative, the agency launched a new Heritage Education program to teach children the importance of preserving archaeological resources on the public lands. The BLM manages thousands of these irreplaceable treasures.

We are in an era when land management and ecosystem protection are becoming top priorities of the Nation. New knowledge and understanding will be necessary to assure that technologically sound ecological principles are applied to the conservation of the Nation's resources. To meet our commitment to manage the resources of the public lands within a framework of environmental responsibility and scientific technology, the BLM developed a strategic plan in 1991 to strengthen our contributions to and use of research. The BLM will build on this strategy in the coming years.

In order to accomplish the goal of responsible public land management more efficiently, BLM Director Cy Jamison initiated an effort this year to streamline the bureau and move technical expertise and funding out to the State and field levels. This rightsizing process will continue through 1992 and includes a plan to review the State structure as well. This will prepare the BLM for the challenges it will face over the next 25 years.

As we prepare to move multiple-use management into the 21st Century, our emphasis is focused on improving the quality and quantity of services provided to all constituencies. This will enable the BLM to not only achieve our immediate goals, but also to fully implement the long range initiatives.

History of the BLM

Approximately 270 million acres — about one-eighth of the Nation — remain today as public lands managed by the BLM for multiple uses.

In the last half of the 18th century and the first half of the 19th century, the United States Government acquired most of the land west of the Appalachian Mountains, eventually owning more than 1.5 billion acres of public domain land that had never been in private ownership. Although the Federal Government has since titled most of this acreage to private citizens, industry, and State and local governments, some of the public lands were dedicated to establish the national parks, national forests, national wildlife refuges, military compounds, and other government facilities. However, approximately 270 million acres — about one-eighth of the Nation — remain today as public lands managed by the Bureau of Land Management (BLM) for multiple uses. In addition, the BLM manages the mineral estate underlying another 300 million acres of land administered or owned by other agencies or private interests. Most of this acreage is located in the Western States, including Alaska, although small parcels are scattered across the Eastern States.

In 1812, Congress established the General Land Office to administer the public lands, with the primary purpose of passing public lands into private ownership. The passage of the Taylor Grazing Act in 1934 and establishment of the U.S. Grazing Service provided for active range management on the public lands, but this was seen as interim management of the land pending its final disposal into non-Federal ownership.

In 1946, the Presidential Reorganization Plan No. 2 merged the Grazing Service with the General Land Office to create the BLM within the Department of the Interior. The BLM became responsible for managing all the resources on the Nation's public lands. However, with more than 2,000 unrelated and often conflicting laws pertaining to the public lands, the bureau had no unified legislative authority to manage those lands.

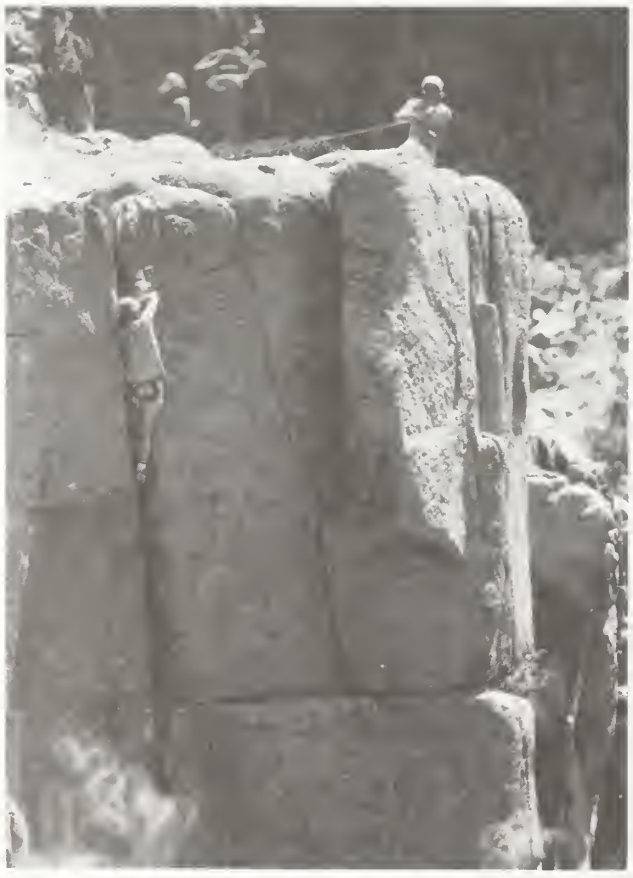
The Federal Land Policy and Management Act (FLPMA)

When Congress enacted FLPMA (43 U.S.C. 1701 *et seq*), it established a coherent legislative mandate for managing the public lands and made the BLM a true multiple-use agency. The law recognized that public land is a national asset, providing goods, services, and vast natural resources for millions of Americans:

The law recognized that public land is a national asset, providing goods, services, and vast natural resources for millions of Americans.

Congress declares that it is the policy of the United States that the public lands be managed in a manner which recognizes the Nation's need for domestic sources of minerals, food, timber, and fiber from the public lands...

...the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use... (FLPMA, Section 102[a][12] and 102[a][8])



FLPMA provides a clear policy that most public lands are to be retained in Federal ownership and managed by the BLM under a concept of multiple use for all Americans, with full participation of the public and a careful balancing of the interests of competing users.

Managing America's Resources

The following resources are managed by the BLM:

- about 1.4 billion barrels of proven oil reserves;
- approximately 12.5 trillion cubic feet of proven natural gas reserves;
- 10 million animal-unit months of forage to support about 4.3 million head of domestic livestock;
- the major portion of the undiscovered but geologically predictable domestic deposits of aluminum, antimony, beryllium, bismuth, cadmium, chromium, cobalt, copper, fluorspar, lead, manganese, mercury, molybdenum, nickel, platinum group metals, silver, tungsten, and vanadium;
- almost 8 million acres of commercial forest land with a producing capacity of about 1.4 billion board feet each year;
- about 80 percent of the Nation's oil shale;
- more than 448 designated areas of critical environmental concern;
- all 11 of the Nation's major tar sand sites;
- thousands of unique recreational areas, including 32 Wild and Scenic Rivers, 22 National Trails, 673 developed and semi-developed recreation sites, 1,749 day-use units and 5,552 family camping units, 65,000 miles of roads suitable for recreation travel by normal vehicle, 4.2 million acres of lakes and reservoirs, and thousands of areas open to a wide variety of recreational uses;
- about one-third of the Nation's coal supply;
- more than 1.5 million acres of designated wilderness in 66 areas and more than 25 million acres of studies completed.
- some 35 percent of the Nation's uranium reserves;
- 186 archaeological and historical listings in the National Register of Historic Places comprising more than 3,000 historical and archaeological properties that have nationally significant values;
- world class deposits of phosphate, sodium, lead, zinc, and potash;
- habitat for one out of every five big game animals in the United States, including many caribou, brown and grizzly bears, desert bighorn sheep, moose, mule deer, and antelope.
- nearly 85,000 miles of streams containing trout, salmon, and other sport fish — enough to encircle the earth three and one-half times;
- prospective sources of geothermal energy on more than 55 million acres, plus 2 million acres of known geothermal resource areas; and
- prospective sources of oil and gas on an undetermined portion of the 570 million acres of mineral estate.
- approximately 96 percent of all wild horses and burros managed, protected, and controlled under the Wild Free-Roaming Horse and Burro Act of 1971.

Today the BLM manages a multitude of assets for the American public.

Multiple-Use Management

American citizens can play a critical role in public land management today and into the future.

The BLM manages the Nation's public lands to meet the needs and desires of the American public. The magnitude and value of these resources frequently lead to conflicting demands and uses for the public lands. The FLPMA mandate for multiple-use management is the BLM's most powerful tool for reconciling the differences of opinion about how public lands are to be managed. Multiple use provides for the development of needed resources, while protecting other resource values from inadvertent damage or destruction. Through a planning, decision making, and management process that balances alternative uses and involves the public at all steps, the BLM can provide opportunities for many different uses of the public lands and ensure that its many resources will remain available in the future.

American citizens can play a critical role in public land management — today and into the future. How Americans deal with the public lands today and tomorrow will determine what this land will offer on BLM's 50th, 75th and 100th birthdays. The BLM encourages all citizens to learn more about its public lands, to become involved in its management, and to enjoy the opportunities afforded by multiple-use management.

Organizational Structure

The BLM's National Office is in Washington, D.C. In addition, there are 12 State Offices, 58 District Offices, and 140 Resource Area Offices. The BLM has about 10,000 employees, most of whom work in field offices in the West. Multiple-use management requires many skills and talents. Foresters, range conservationists, wildlife biologists, archaeologists, adjudicators, leasing specialists, and many other disciplines are needed to care for and manage the public lands.

The following pages provide an overview of public land management during Fiscal Year (FY) 1991. Additional information about the BLM and the public lands is available from BLM headquarters or State or local offices.

Renewable Resources Programs

Fish and Wildlife Habitat
Riparian-Wetland Areas
Soil, Water and Air
Rangelands
Forestry
Wild Horses and Burros

Fish and Wildlife Habitat

More than 3,000 species of wildlife and fish live on BLM-managed lands. This includes 225 Federally-listed threatened and endangered species and 1,337 candidate species.

Fiscal year 1991 marked the fourth year of implementing *Fish and Wildlife 2000,* the BLM's strategic plan for fish and wildlife resource management on the Nation's public lands.

The major goals of the program between now and the year 2000 are to preserve and enhance habitats, ensure a diversity and abundance of wildlife, and preserve and increase populations of threatened and endangered species.

Partnerships

Continued emphasis on the development of partnerships with various organizations has resulted in increased investments from conservation groups and other private interests. In FY 1991, the BLM implemented 307 Challenge Cost Share projects worth $8 million benefiting fish, wildlife, and special status plants with challenge cost share funds appropriated by Congress, and matching funds contributed by conservation and wildlife organizations.

In 1991, the BLM entered into partnership agreements with several additional diverse organizations to benefit **Animal Inn,** a nationwide initiative to educate the public about the importance of dead and fallen trees to fish and wildlife; **Fishing Has No Boundaries,** a partnership to promote fishing opportunities for disabled individuals; **Bring Back the Natives**, which seeks to restore entire public land watersheds and reestablish native fish; and a newly-formed **Interagency Task Force on Neotropical Migratory Birds**.

The BLM manages more fish and wildlife habitat than any other Federal agency.

Threatened and Endangered Species

As a result of hiring more botanists, the BLM has found some plants to be more abundant than originally believed.

Desert Tortoise

The habitat for desert tortoise occurs in the four-State area of Arizona, California, Nevada and Utah. Each of these States is implementing the BLM's Rangewide Plan for Managing Habitat for the Desert Tortoise.

The BLM has continued to consult with FWS to ensure that all BLM actions comply with the requirements of the Endangered Species Act. In Arizona and California, the BLM has required the construction of tortoise proof fences and the installation of culverts and bridges to aid tortoises in crossing heavily traveled roads. In Nevada, the BLM has cooperated with the City of Las Vegas to compensate for loss of tortoise habitat caused by housing construction. The BLM is working with others on a cooperative regional management plan for the Western Mojave Desert which involves 10 cities and towns, 4 counties, 12 State and Federal agencies, and private groups.

Black-footed Ferret

Black-footed ferrets are one of the rarest mammals in the world. The BLM, working with other organizations, developed a black-footed ferret reintroduction plan and initiated intensive evaluation of potential reintroduction sites in Wyoming, Colorado, Utah, and Montana. More than 750,000 acres of potential habitat were inventoried in 1991 in preparation for additional releases in 1992 and beyond. The first release of captive bred ferrets into the wild occurred September 1991 in Shirley Basin, Wyoming.

Special Status Plants

Some 92 Federally-listed threatened or endangered plant species occur on BLM land, while another 767 plant species are candidates for listing.

During 1991, the BLM expanded its technical staff by hiring botanists in several States to monitor, inventory, and recommend management actions for special status plants. By the end of 1991, more than 300,000 acres of inventory were completed. This has resulted in the discovery of several new populations of plants previously unknown.

As a result of hiring additional botanists, the BLM has found that some plants are more abundant than originally thought. For example, in 1991, the BLM cooperated in an annual survey of the Federally endangered Sneed's pincushion cactus. The New Mexico recovery team stated the cactus is now abundant and could soon be removed from the endangered species list.

Wildlife

Nongame Birds

The BLM is a member of the Federal interagency program known as *Partners in Flight — Aves De Las Americas.* The BLM has prepared a national strategy for managing migratory bird habitat in response to the growing concern about the precipitous decline of many nongame bird populations. Neotropical birds breed in North America and winter in Latin and South America.

Restoration and enhancement of nongame bird habitat, especially in key riparian and wetland areas, have been accomplished in many locations. In Montana, more than 20,000 trees have been planted in riparian-wetland areas and over 1,500 reservoirs have been built in the prairie potholes area.

Considerable habitat vital to nongame birds has been acquired through exchanges. Examples of exchanges in FY 1991 include the Arizona acquisitions in the San Pedro Riparian National Conservation Area and the Empire and Cienega Ranches; acquisition of the New River coastal wetlands in Oregon; and California's acquisitions in Big Morongo Canyon, North Fork American River, South Fork Merced River, Upper Sacramento River, King Range/Mattole Estuary, Yankee Jim and Fitzhugh Creek.

Desert Bighorn Sheep

The BLM manages 8,809,000 acres or 80 percent of historic bighorn sheep habitat of which 58 percent has been inventoried. In 1991, the BLM, in cooperation with State wildlife agencies and bighorn sheep conservation groups, established 10 new water sources; reintroduced bighorns into 6 historic habitat areas;

augmented 6 herds; and inventoried 2,333,711 acres of sheep habitat.

Watchable Wildlife

Watchable Wildlife is a joint Wildlife and Recreation initiative in cooperation with other Federal and State agencies and organizations. Cooperatively produced Wildlife Viewing Guides have already been completed for Oregon, Utah, Montana and Idaho as part of a 50-State series. The guides identify the best wildlife viewing opportunities within each State. To date, 160 BLM areas have been designated.

The BLM's Coos Bay, Oregon, District dedicated the Dean Creek Elk viewing area in 1991. Dean Creek was a cooperative effort with the Oregon Department of Fish and Wildlife, Ducks Unlimited and the Rocky Mountain Elk Foundation, and community groups.

Upland Game Birds

Concerted on-site management for upland game birds is underway in many States. In New Mexico, Marathon Oil Company constructed three water units in habitat for least prairie chickens as a mitigation measure for disturbance caused by oil and gas drilling. Wild turkeys were reintroduced into the Laguna Seca Special Management Area in New Mexico. In Idaho, more than 14,250 acres of sage grouse habitat were seeded to rehabilitate an area burned by wildfire in the Thorn Creek area of the Bennett Hills Resource Area. In Oregon, sharp-tailed grouse were reintroduced in BLM's Vale District, a project with the Oregon Department of Fish and Wildlife, The Nature Conservancy, and the Forest Service.

Raptors

In 1990, the BLM, in conjunction with Boise State University, The Peregrine Fund, The Idaho Department of Fish and Game, the Fish and Wildlife Service, and other private organizations, established the Raptor Research and Technical Center in Boise, Idaho. The RRTAC is coordinating a multi-million dollar 5-year research project to assess the habitat alteration in the Snake River Birds of Prey Area.

Other efforts in FY 1991 included the evaluation of raptor habitat along the Rio Grande Gorge in New Mexico; inventory of 20,000 acres of ferruginous hawk nest sites in Idaho's Burley District; and monitoring of Mexican black hawk use of riparian habitat in Arizona's Kingman Resource Area.

Big Game

In 1991, an interdisciplinary team comprised of representatives of Western State wildlife agencies, selected big game organizations, and BLM managers and biologists was organized to formulate a national strategy for managing big game habitat. The plan will stress minimizing potential conflicts with other uses such as livestock grazing and mining.

Numerous management activities are already occuring. Two examples are planting of 20,000 bitterbrush seedlings in Idaho's Shoshone District to rehabilitate mule deer and elk winter ranges destroyed by wildfire, and reintroduction of elk into the Peavine Mountain

Area in Oregon's Medford District. The BLM, Arizona Department of Fish and Game, and the One Shot Antelope Club developed several new water sources to enhance habitat conditions and encourage antelope repopulation in Arizona's historic habitats.

Working with the Colorado Division of Wildlife, the Rocky Mountain Elk Foundation, and the Forest Service, the BLM conducted a prescribed burn on the 600 acres of winter and transition habitats for elk in Colorado's Glenwood Springs Resource Area.

A new strategy for managing big game habitat will minimize conflicts with other uses such as livestock grazing and mining.

In 1991, the BLM completed a management strategy for 113 special status fish, including 39 Federally-listed species

Waterfowl

The major thrust of the BLM's waterfowl habitat management under *Fish and Wildlife 2000* is to manage 20 million acres of wetlands. A strategy is being implemented to manage 225 key waterfowl areas. The BLM is also implementing the North American Waterfowl Management Plan through this strategy.

Projects with Ducks Unlimited totaling over $1 million are being implemented in five States. In Alaska, a 5-year agreement for wetland inventory and mapping is nearly complete. Another example is Montana, where the BLM cooperated with DU in a dam reconstruction project creating 40 acres of aquatic habitat and 100 acres of nesting habitat.

Fisheries

Anadromous Fish Habitat

Numerous projects were implemented in the Pacific Northwest under the Anadromous Fish Habitat Management Plan. The BLM also completed a management plan for the Columbia and Snake River Basins. This plan, prepared for the Pacific Northwest Salmon Summit, integrates proposed activities for management of anadromous fish habitat in the Idaho, Oregon and Washington portions of the basin managed by the BLM. It also outlines actions to restore habitat for dwindling populations of salmon, steelhead, and sea-run cutthroat trout. A 3,400–foot channel along the Trinity River in California was constructed to enhance fish rearing habitat; the Brewster Gorge fish passage was completed to allow spawning for steelhead and coho salmon; and 5.5 miles of Wolf Creek was restored to benefit pool habitat for coho salmon in the BLM's Roseburg, Oregon District.

Resident Fish Habitat

During 1991, several BLM State Offices completed projects. Habitat for bass and other warmwater species in Arizona's Yuma District was enhanced as a result of sinking unsold Christmas trees into the Lower Colorado River. In Idaho, willows were planted along the Big Wood River by the BLM's Shoshone District staff.

In Montana, along the Big Hole River, habitat for the Montana arctic grayling was improved through a cooperative project with the Montana Department of Fish, Wildlife and Parks; the Forest Service; and the Montana Natural Heritage Program. Additionally, a dam in the Lewistown District was restored on Butch Reservoir, a popular recreational fishing site, and the 50-acre foot Chapman Coulee Reservoir for fisheries and waterfowl habitat was also completed.

Threatened and Endangered Fish

A national strategy for managing the habitat of 113 special status species of fish, including 39 listed as threatened or endangered was completed in 1991.

Also during 1991, four BLM States–Idaho, Arizona, New Mexico and Oregon –completed several field projects for restoring and enhancing threatened and endangered fish. Projects included habitat improvement at Mesquite Springs in Arizona for the transplant of the desert pupfish; habitat improvement for the redband trout in partnership with the Idaho Chapter of Trout Unlimited; reestablishing the Rio Grande cutthroat trout in Warm Springs Canyon, New Mexico; and surveys of stock ponds for exotic fishes competing with the Gila top minnow in cooperation with the Arizona Game and Fish Department.

Recreational Fishing

The BLM's participation in National Fishing Week activities in 1991 increased substantially when nearly 3,700 people participated in 30 events bureauwide. Most BLM State Offices expanded festivities by offering free camping to all participants. Many BLM State Offices featured special events for disabled or disadvantaged anglers in response to a national agreement signed with Amerifish Corporation in 1990.

Riparian-Wetland Areas

Riparian areas are green ribbons of vegetation bordering streams, rivers, and lakes. They are vital to healthy ecosystems in the West.

The BLM's Riparian Area Management Policy was incorporated into *Riparian-Wetland Initiatives for the 1990's,* a blueprint for managing riparian-wetlands that encompass 23.7 million acres (8.8 percent) of BLM lands. The initiative stresses a holistic watershed management approach with participation on an interdisciplinary, cooperative basis. It sets a series of goals and strategies to achieve proper functioning condition on at least 75 percent of riparian-wetland areas by 1997 and to provide a wide variety of vegetation and habitat diversity for wildlife, fish, livestock, and watershed protection. The initiative also emphasizes management of the natural recovery process prior to considering structural measures.

1991 Accomplishments

During FY 1991, the BLM completed a guide for classifying riparian-wetland sites using the ecological site concept. This technique was used in the inventory of 500,000 acres of riparian-wetland habitat. Each State Office produced a strategic plan to guide statewide implementation of the *Riparian-Wetland Initiatives for the 1990's.* The BLM continued to restore degraded riparian-wetland areas by completing 682 improvement projects. In addition, 532 existing riparian projects were maintained by the BLM, cooperators, volunteers, and land users.

All necessary actions are being implemented in FY 1991 for responding to recommendations made in the General Accounting Office's report, *Public Rangelands, Some Riparian Areas Restored But Widespread Improvement Will Be Slow.* The State strategic plans were consolidated in the nationwide initiative to identify 174,000 miles of riparian areas to be targeted for restoration in the next 5 years.

Demonstration areas

Demonstration areas are used to show the multiple benefits of improving riparian areas. Benefits include increased ground water recharge, restored perennial stream flows, increased forage and cover for wildlife and livestock, reduced flood and sediment damage and improved water quality. As a follow up to implementation of the demonstration areas with balanced stewardship and full cooperation with all interested parties, the BLM developed a special Director's Riparian Stewardship Award. The award recognizes permittees and others who are key to successful riparian area restoration and enhancement efforts. Twelve awards were presented in FY 1991 to individuals or groups who were instrumental in fostering cooperation and partnerships in implementing the riparian-wetland initiative.

The BLM manages 23.7 million acres of riparian-wetland areas.

In 1991, the BLM inventoried 500,000 acres and completed 682 improvement projects

Training
During FY 1991, coordinated riparian management training sessions were held in Colorado, Nevada, and Alaska. Numerous public education workshops were held to increase the "riparian consciousness" among resource personnel, public land users, and the general public. Seminars were conducted in most States to improve the public understanding of the ecological requirements for the proper restoration and maintenance of healthy riparian-wetland communities.

Manager Recognized
In recognition of outstanding professional service, the Elko, Nevada District Manager was awarded the Public Lands Foundation's 1991 Outstanding Lands Professional Award for his determined effort to complete the Marys River Land Exchange in Nevada. The transaction involved obtaining 47,000 acres of prime riparian-wetland habitat necessary to support the endangered Lahontan cutthroat trout.

Team Concept
The BLM continues to work in partnership with youth and conservation groups, public land users, schools, State and other Federal agencies, and the general public on riparian-wetland restoration and enhancement efforts. The "Riparian Enhancement Team" concept was expanded in FY 1990 beyond the Oregon effort and now involves volunteer programs in Arizona, California, Colorado, Idaho, Montana, New Mexico, Nevada, and Utah.

The BLM is working to restore riparian areas on public lands where they have been degraded. Here a new side channel is constructed along the South Fork of the Clearwater River in Idaho to provide fish habitat previously degraded by dredge mining. (photo by Craig Johnson, BLM)

A Valuable Resource: Riparian-Wetland Areas

- Purify water
- Reduce risks of flood damage
- Reduce streambank erosion
- Increase water supply by storing water in aquifers
- Increase biodiversity
- Increase groundwater supplies
- Provide water, shade, and forage for livestock
- Maintain habitat for a variety of fish, plants and wildlife
- Provide areas to fish, camp, picnic, and relax

Soil, Water, and Air Quality

The BLM assesses and improves the quality of soil, water, and air on the public lands

In 1991, the BLM completed 3 million acres of soil surveys and 275 watershed improvement projects.

The consideration of soil, water, and air is basic to meeting many of the multiple-use objectives of the BLM. Through the assessment and inventory of soil, water, and air resources, information is provided for multiple-use planning and management. The soil, water, and air program also achieves objectives specific to water and air quality, watershed improvement, and riparian-wetland area enhancement.

Soil Surveys
During FY 1991, over 3 million acres of soil survey were completed. The BLM has mapped soil on 52 percent of the land it manages and continues toward the goal of soil mapping all public lands.

Water Rights
The BLM is participating in basin wide water rights adjudications in the Gila, Snake, and Rio Chama Rivers, the Delta and Gulkana Rivers in Alaska, the Klamath River in Oregon, the Yakauna River in Washington, and statewide in Montana. Progress is being made toward meeting the overall goal of quantifying all existing water uses to facilitate water right claims on public lands. During FY 1991, nearly 11,000 water sources were added to data bases used for recording water right filings with the States. Some water right filings were made in response to State river basin adjudications while others were made to the States on BLM's initiative. Efforts to assess instream flow requirements continue. Acquiring water rights is vital to the successful management of the public lands.

In FY 1991, 275 watershed improvements were completed. These improvements reduced erosion and sediment, improved water quality, stabilized stream banks and channels, reduced salinity, recharged ground water, and increased water quantity. Maintenance of existing improvements continues, with 269 projects being completed in FY 1991. Over 3,000 watershed stations were monitored to assess progress toward meeting soil and water management objectives.

Salinity Control
The BLM's systematic strategy for implementing salinity control on the public lands includes the following.

Phase I: Rank all watersheds in the Colorado River Basin;
Phase II: Determine those with strongest potential for treatment;
Phase III: Develop comprehensive plans involving the public and users, including estimates of soil erosion and an economic analysis;
Phase IV: Monitoring; and
Phase V: Maintenance.

The BLM operates 135 weather stations and 15 acid rain monitoring stations to provide critical data on climate trends.

In FY 1991, nine Phase III plans were developed, 26 projects were implemented, 17 project areas received maintenance, and vegetation and soil inventories were conducted on over 100,000 acres.

Air Resources

The air resource program supports the operation of more than 28 Remote Area Weather Stations and 107 other climate stations to provide site-specific climate information for use in a wide variety of management activities. BLM's air modeling supports a wide variety of bureau activities including energy and mineral leasing, smoke management for prescribed burning, wilderness management, and resource management planning. Air modeling is used to help ensure compliance with Environmental Protection Agency and State air quality standards and regulations.

The BLM's air resource program continues to play a key monitoring role in the National Atmospheric Deposition Program by operating 15 acid rain monitoring stations at remote locations in nine Western States. The BLM has been an integral part of this multi-agency effort since 1979 and has provided information on atmospheric deposition over a significant portion of the Western U.S. This information is used by a variety of Federal and State agencies, universities, power companies, industries and private organizations. Hundreds of requests for data are received each year.

In addition to establishing geographical patterns and temporal trends in atmospheric deposition, information from the network is used to determine pollutant and nutrient loadings to terrestrial and aquatic ecosystems (including Class 1 Wilderness Areas), to support research on the responses of vegetation and soils to different management strategies, and to understand watershed processes and nutrient cycling. These data are also used in Environmental Impact Statements, Resource Management Plans, and evaluations of permit applications for new emission sources.

Global Change

The BLM Global Change Research Program is part of a Presidential Initiative developed by the Committee on Earth Sciences of the Federal Coordinating Committee for Science Engineering and Technology, Office of Science and Technology Policy.

The BLM program, called "Ecological Change in Environmentally Stressed Ecosystems of the Western and Northern U.S.," seeks to:

1. Determine the sensitivity and response of ecosystems and ecological processes to existing climate conditions and other environmental factors and human influences on a local and regional scale.

2. Evaluate how future global change may affect long term viability and productivity of rangelands, forests, wetlands, riparian areas, tundra, and other sensitive ecosystems on the public lands.

3. Assess implications for future natural resource management on the public lands to sustain multiple uses, productivity, health and diversity.

To accomplish these goals, the BLM initiated a research effort in 1991 using existing programs and three new competitive research projects. About 40 percent of the program is being conducted by BLM scientists, and the remaining 60 percent by universities, Federal agencies, and other organizations, including some in Russia and Uzbekistan.

The BLM program consists of six projects under the direction of BLM State Offices and Cooperative Research Units. They include Colorado State University (Wyoming State Office), Oregon State University (Oregon State Office), and the Raptor Research and Technical Assistance Center (Idaho State Office). In addition, the Arizona and New Mexico State Offices are conducting projects under assistance agreements with the University of Arizona and New Mexico State University.

Rangelands

The BLM manages 170 million acres of public rangelands

About 18,900 livestock operators used lands administered by the BLM in 1991, through 9.5 million licensed AUM's .

Congress has authorized grazing on Federal lands under three laws — the Taylor Grazing Act of 1934, the Federal Land Policy and Management Act of 1976 and the Public Rangelands Improvement Act of 1978.

The BLM administers livestock grazing on about 170 million acres of public rangeland, mostly in 11 Western States. In 1991, nearly 19,200 permittees grazed livestock on BLM-managed lands. These ranchers must use a mix of adjacent private, State and public rangelands because of the West's patchwork pattern of Federal, State and private land ownership. The importance of public lands in this mix is shown by the fact that about one-third of the beef cattle in 11 Western States graze at least part of the year on public rangelands.

BLM rangelands are in better condition now than at any time in this century. The BLM has found that the amount of public rangeland in good to excellent condition has more than doubled since 1936 — from 15.8 percent to 36 percent in 1991. During that same period, the amount of BLM rangeland in poor condition declined by more than half — from 36.3 percent to 15 percent, the lowest percentage ever recorded. The public rangeland's improving condition is further evidenced by the dramatic increase in big game populations over the past three decades.

The principal objective of the BLM's range management program is to protect and improve rangeland resources for multiple uses, including livestock grazing. To develop sound land use plans, the agency works with range users and other interested parties at the national and local levels. After drafting land use plans and preparing environmental impact statements, the BLM implements its decisions through grazing allotment management plans or coordinated activity plans. These plans identify grazing management prescriptions and other actions that are needed to achieve site-specific vegetation and other resource management objectives. The BLM prepared or revised 204 grazing activity plans during FY 1991.

The Range of Our Vision

In FY 1990, the BLM announced its *Range of Our Vision* strategy, which seeks to improve public lands so that future generations of Americans can use and enjoy them. The strategy sets three goals for the agency to reach before or by the year 2009, which marks the 75th anniversary of the Taylor Grazing Act. The goals are: (1) To get 75 percent of the riparian (streamside)-wetland areas on BLM lands into proper functioning condition by 1997. (2) To achieve the highest ecological conditions on 40 percent of the public rangeland, amounting to 68 million acres. And (3) to reduce

the amount of public rangeland that is in poor condition to 10 percent, or 17 million acres.

The BLM intends to accomplish these goals by completing ecological site inventories, developing allotment management or coordinated activity plans (which include proper vegetation use and grazing prescriptions), installing needed range improvements, and by monitoring trends to determine whether management objectives are being achieved.

To fully realize the aims of *The Range of Our Vision*, the BLM needs the assistance of public lands users, conservation groups, universities, and other interested parties, as well as the support of Congress and the public. The agency tries to earn that cooperation and support by documenting its rangeland work and highlighting its goals and successes. Partly in response to that informational effort, the livestock industry has shown a growing recognition of the need to restore and maintain riparian-wetland areas.

In 1991, the BLM

-inventoried 1.6 million acres

-monitored 102.5 million acres

-developed 310 water facilities

-constructed 535 miles of fencing

-treated 53,000 acres of vegetation

-maintained 154 improvement projects.

Inventory and Monitoring
In FY 1991, the BLM inventoried about 1.6 million acres and monitored 102.5 million acres of rangeland. Based on monitoring data, the agency issued 692 allocation decisions or agreements on 7.8 million acres.

Range Improvements
During FY 1991, the BLM improved the public rangelands by developing 310 water facilities, constructing 535 miles of fencing, treating 53,000 acres of vegetation, and maintaining 154 improvement projects.

Stewardship
The BLM and the U.S. Forest Service continue to support the Experimental Stewardship Program (ESP), as authorized by the Public Rangelands Improvement Act of 1978. The purpose is to improve rangeland stewardship by promoting cooperation among Federal and State land management agencies, grazing permittees, conservation groups, universities, and other parties. During FY 1991, the Ninth National Stewardship Conference was held in Idaho.

The rangeland program also honors permittees for good stewardship through the Interior Secretary's "Partners in the Public Spirit" awards program.

Grazing Fees
The current grazing fee formula was established by Congress in the Public Rangelands Improvement Act of 1978. The system reflects changes in livestock industry economic conditions -- specifically, the cost of production, the price of beef, and forage values. Under the formula, grazing fees rise when the livestock industry prospers, and fall when the industry declines. The fee rose to $1.97 per Animal Unit Month (AUM) in 1991, up from $1.81 in 1990. (An AUM is the amount of forage consumed by a cow and her calf, one horse, or five sheep in one month.) The fee has risen 46 percent since 1987, when it was $1.35 per AUM.

The BLM collected $18.7 million in grazing fees in FY 1991, up from $18.1 million the previous year. The agency distributed $3.08 million in grazing receipts to States and counties in 1990, the most recent year for which statistics are available.

Pest Control

Weeds
Noxious weeds have infested six million acres of BLM land, and they are spreading at a rate of about 2,000 acres per day. Approximately 30,000 acres were treated for noxious weeds in FY 1991, some of which are being managed by the introduction of predaceous insects. The BLM works with States and counties to control noxious weeds on public lands. In 1991, the agency completed cooperative agreements with most of the Western States. The BLM is participating with other agencies in weed research.

Grasshoppers
The BLM, in cooperation with the Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), periodically initiates actions to control grasshoppers and other insects on public lands. APHIS applies control treatments when infestations reach epidemic levels. The BLM and APHIS are sponsoring research to develop alternative pest management techniques to prevent such epidemics.

Forest Management

The BLM manages 48 million acres of forests, of which 12 million acres are commercial and 36 million acres are woodland.

The BLM is taking a new ecosystem approach to forest management, emphasizing biodiversity.

The BLM's Forestry Program is located in the 12 Western States and encompasses over 48 million acres, 22 million of which are located in Alaska. Of this total, 12 million acres are classified as productive commercial timberland and 36 million acres as woodland. Four million acres of the commercial forests is located in the lower 48 States, half of which is located in western Oregon.

Much of this productive forest is not available for harvest. About 45 percent of the land in the lower 48 States is set aside for such things as wilderness, special study areas, as damageable sites, or areas difficult to reforest. The magnitude of restrictions which are and will be imposed by the northern spotted owl issue is unknown at this time but is expected to be substantial. Inventories of the forests in Alaska are scheduled to begin in 1992 and the land use allocations will be evaluated then.

In the past, the BLM's forestry program focused on forest commodities such as sawlogs, posts, polls, and firewood. Its funding emphasis has been based on commodity sales and reforestation of timber producing sites. Few opportunities to enhance lands for other than timber production have been available because of limited capability.

Although timber management has been the program's historic focus, many forest management activities support goals and objectives of other BLM programs such as management of riparian areas, threatened and endangered species, wildlife habitat and fisheries habitat. A new ecosystem approach is taken in the strategic plan, *Forests, Our Growing Legacy*. Its related initiatives have broadened the forestry mission to include more noncommodity forest uses.

Forests, Our Growing Legacy

The forest management outreach effort continues to gain momentum. It was initiated in 1990 to expand the scope of the existing forestry program, emphasizing total forest/woodland management. A status report on this strategic plan was completed on schedule in 1991. Numerous successes were achieved through this effort such as the signing of a memorandum of understanding with the American Forestry Association

(AFA). The AFA Heritage Forests and Global ReLEAF programs have led to the successful completion of tree planting projects on BLM lands in New Mexico, Wyoming, California, Arizona, and Nevada using dollars from nongovernment sources.

Sales of Forest Products

The harvest of forest products from commercial forests and woodlands remains an important function of the program. It can be used as a tool to create and enhance biodiversity and support local and regional economies.

Over 44,000 permits were issued for products in 1991.

The harvest of sawlogs in western Oregon decreased from 1,169 million board feet (mmbf) in 1990 to 544 mmbf in 1991. This was due to restrictions on sale offerings in response to northern spotted owl issues and reductions in harvests as a result of the soft housing market. Receipts decreased from $206 million in 1990 to $140 million in 1991. Receipts from the sale of forest products outside of Western Oregon increased from $6.5 million in 1990 to $8 million in 1991.

Receipts from non-timber sale forest products (such as fuelwood, mushrooms, or ferns) from all forest lands was approximately $300,000. Over 44,000 permits were issued for such products in 1991.

Northern Spotted Owl Issue

On July 23, 1990, the decision by the FWS to list the northern spotted owl as threatened under the Endangered Species Act (ESA) went into effect. The Secretary of the Interior established an interdisciplinary team to develop a recovery plan for the owl which is scheduled for completion in May,1992. This plan, if adopted by the Secretary, will be incorporated into future BLM Resource Management Plans (RMP's).

As a requirement under the ESA, the BLM must consult with the FWS on all timber sales that may affect the spotted owl. In June, 1991, the FWS found that 52 of the BLM's 1991 timber sales would jeopardize the existence of the owl. The BLM was able to reconfigure 8 of the 52 sales, but 44 sales could not meet FWS requirements. The 44 sales accounted for 219 million board feet (mmbf). On September 11, 1991, the BLM requested that the 44 sales be exempted from the ESA. Exemption decisions are made by a special cabinet-level committee, which is expected to convene in 1992.

The BLM is developing new RMP's for western Oregon Districts. These plans accompanied by draft environmental impact statements are expected in August 1992. These RMP's will establish the level of timber harvests for the next decade starting in FY 1993. The BLM has prepared 750 million board feet for offering in FY 1992. These sales are designed in such a way as to minimize impacts to the northern spotted owl while also attempting to reduce the economic impact to timber dependent communities. All of these sales which may affect the owl or its critical habitat have been submitted to the Fish and Wildlife Service for consultation pursuant to the ESA.

Reforestation and Stand Improvements

A total of 38,000 acres were reforested. Stand improvements such as thinning were completed on 6,700 acres; a total of 9,300 acres were fertilized; and 27,000 acres were prepared for future reforestation.

Reforestation and stand improvements are part of the BLM's forestry program.

Wild Horses and Burros

The BLM manages over 50,000 wild horses and burros on the public lands.

Nearly 51,000 wild horses and burros roamed rangelands under the jurisdiction of the BLM in 10 Western States in 1991. More than 70 percent of wild horses are in Nevada, while nearly half of all wild burros live in Arizona. Most of the remaining burros are divided evenly between California and Nevada.

The BLM administers the Wild Free-Roaming Horse and Burro Act (PL 92-195, as amended) to protect, manage and control wild horses and burros on public lands.

The BLM estimates that the appropriate management level of wild horses and burros on the public lands is 30,000 animals. To maintain healthy herds of wild horses and burros as part of a thriving natural ecological balance, the Act requires the BLM to remove excess animals and place them in private care. In 1991, the BLM removed about 7,000 excess animals—6,400 horses and 600 burros.

The BLM placed nearly 6,000 wild horses and burros in private care through the adoption program in FY 1991. Since 1973, more than 106,000 wild horses and burros have been adopted by residents of every State except Hawaii. Animals not suited for adoption are cared for on two sanctuaries in Oklahoma and South Dakota.

The BLM continued cooperative agreements with State Departments of Corrections in California, Colorado, New Mexico, and Wyoming. These agreements provide training programs to make 5 - 9 year old horses more adoptable. Inmate-trainers learn discipline and useful skills as they partially gentle the horses before they are offered for adoption. The prisons trained more than 900 horses in 1991.

A highlight of the program in FY 1991 was the dedication of the Nation's first wild burro range in Marietta, Nevada, to recognize the role these animals played in the settlement of the West. Three wild horse ranges were established in previous years.

Wild free-roaming horse and burro populations as of September 30, 1991

State	Horses	Burros	Total
Arizona	206	3,018	3,224
California	2,011	1,708	3,719
Colorado	810	0	810
Idaho	444	1	445
Montana	121	0	121
Nevada	31,650	1,784	33,434
New Mexico	29	0	29
Oregon	2,006	6	2,012
Utah	2,523	100	2,623
Wyoming	4,280	0	4,280
TOTAL	44,080	6,617	**50,697**

In 1991, the BLM dedicated the Nation's first wild burro range in Marietta, Nevada, in recognition of the animals' important role in the culture of the "Wild West."

Energy and Minerals

Oil and Gas
Geothermal Energy
Mineral Materials
Solid Nonenergy Leasable Minerals

Coal
Oil Shale
Mining Law

The BLM manages the Federal mineral estate underlying 570 million acres.

The Mineral Leasing Act of 1920, as amended, and the Mineral Leasing Act for Acquired Lands of 1947, as amended, give the BLM authority to issue mineral leases on about 570 million acres of public land, including national forests and private land where mineral rights have been retained by the Federal Government.

At the end of 1991, there were 81,673 oil and gas leases in effect, covering almost 60 million acres.

Oil and Gas

Oil and Gas Leasing

Since passage of the Onshore Oil and Gas Leasing Reform Act in 1987, all public land that is available for oil and gas leasing must first be offered through a competitive leasing process in which BLM State Offices offer oil and gas parcels through oral auctions. Parcels that are not sold at these auctions are then available for a 2-year period for noncompetitive leasing.

All noncompetitive lease offers filed on the first business day following the oral auction are considered filed simultaneously. The priority among any multiple offers received on this day for the same parcel is determined by drawings open to the public.

The depressed domestic oil and gas industry continued to affect the Federal oil and gas leasing program in 1991.

Competitive Lease Sales

The BLM conducted 43 competitive lease sales in which 8,423 parcels covering about 7.85 million acres were offered, with 2,993 parcels involving about 1.78 million acres receiving bids at the oral auctions. Bonus bids received totaled about $41.3 million.

Noncompetitive Leases

Following the competitive sales conducted in accordance with the Reform Act, 5,430 parcels covering about 6.07 million acres were availablefor noncompetitive leasing in 1991. The total sum of noncompetitive leases issued from unsold parcels from offers filed before the sale and the day after the sale was 1,980 leases containing 1,862,177 acres. Additional parcels may be leased during the 2-year period after the lands have been offered for sale.

As of September 30, 1991, there were 81,673 oil and gas leases in effect covering about 59.9 million acres.

In FY 1991, as further follow-up of the study reports submitted to Congress by

the General Accounting Office (GAO) and the National Academy of Sciences, the BLM conducted three Fluid Minerals Planning Technical Procedures Reviews of the land use planning and National Environmental Policy Act (NEPA) documentation procedures conducted in the BLM's Montana, New Mexico, and Wyoming State Offices. Such reviews help improve up-front land use planning and environmental analysis to ensure that leases offered for sale meet NEPA and FLPMA requirements.

Oil and Gas Operations

The BLM is responsible for the approval and inspection of drilling, production, and abandonment operations on Federal and Native American Indian leases, to ensure (1) compliance with regulations for protection of the surface and subsurface environment, public health and safety, and (2) proper accountability of oil and gas production. As of September 30, 1991, there were 22,747 producing leases with 85,556 operational wells on lands under supervision. Of these, 3,506 leases and 12,087 producible wells were located on Native American Indian lands. Together, the leases produced 163 million barrels of oil and about 1,381 million cubic feet of gas in FY 1991.

Federal and Native American Indian leases generated about $758 million in bonus, rent, and royalty payments in FY 1991. Fifty percent (or in the case of Alaska, 90 percent) of the revenue generated from the public land is returned to the States where production occurs. Payments also are distributed to the various tribes and individual Native American Indians. The Minerals Management Service (MMS) collects and distributes these receipts.

The BLM has developed a series of six published Onshore Oil and Gas Operating Orders (see chart at right) which establish minimum technical standards for oil and gas operators.

New Inspection Strategy

The BLM revised and initiated an Inspection and Enforcement Strategy in FY 1991 that provides for greater production accountability while continuing to emphasize a balanced inspection program that includes drilling and environmental inspections. The BLM made and met a commitment in FY 1991 to inspect all Native American Indian oil and gas leases.

Cooperative Agreements are encouraged by the BLM and such agreements have been negotiated with the Navajo, Ute Mountain Ute, and Jicarilla Apache Tribes. Such agreements provide for greater inspection participation by Native American Indian Tribes with shared funding by the BLM.

The BLM is also working with MMS and the Bureau of Indian Affairs and has developed a Memorandum of Understanding between the agencies to further address the concerns of the Senate Select Committee on Indian Affairs regarding production accountability on Native American Indian leases.

Low Oil Prices

Low oil prices that began in 1986 continued until August 1990, and the BLM extended the suspension of production requirements on stripper/marginal wells for another year to prevent premature abandonment of oil and gas wells and potential loss of recoverable reserves. As of September 1991, there were 350 such leases in suspension. During FY 1990, the BLM

Oil and Gas Operating Orders

Order No. 1 Approval of Drilling Operations, published in 1983, currently under revision.
Order No. 2 Drilling Operations, issued in 1988, clarified in 1992.
Order No. 3 Site Security, issued in 1989.
Order No. 4 Measurement of Oil, issued in 1989.
Order No. 5 Measurement of Gas, issued in 1989.
Order No. 6 Hydrogen Sulfide Operations, issued in Nov. 1990.

Three additional Orders are being developed —
No. 7, Disposal of Produced Water, No. 8, Well Workover/Completion, and No. 9, Waste Prevention and Beneficial Use.

The BLM met its commitment in 1991 to inspect all Native American Indian leases.

held a series of public meetings to obtain comments and information from the public, State and local governments, and industry, to assist the BLM in evaluating further continuance of the policy and viable alternatives. The BLM evaluated the comments received as well as subsequent written comments during 1991.

Drainage Backlog

The BLM has continued its aggressive program to identify all wells that are potentially draining Federal and Native American Indian resources. During FY 1991, the drainage backlog was reduced from about 22,000 cases to about 12,000 cases, and most offices were moving toward resolving the identified drainage situations. The emphasis of the program is on efficient prevention and recovery of lost revenues due to drainage.

At the end of 1991, a total of 203 competitive geothermal leases were in effect covering 327,232 acres and 372 noncompetitive geothermal leases were in effect on 583,570 acres

Geothermal Energy

Geothermal Leasing

The Geothermal Steam Act of 1970 provides the BLM authority to issue leases on public, withdrawn, and acquired lands administered by the Departments of the Interior and Agriculture. The Geothermal Steam Act Amendments, which were effective September 22, 1988, modified the Act.

During FY 1991, Public Law 101-22 was enacted on November 15, 1990, creating the Newberry National Volcanic Monument in the State of Oregon. The new law allowed the holding of a special competitive lease sale. Thirteen parcels were offered with eight parcels receiving bids yielding $71,940 in bonus bids at a sale held on June 20, 1991. Competitive leases issued in FY 1991 totaled 9, all in Oregon, covering 5,433 acres. Noncompetitive leases issued during FY 1991 totaled 52 covering 81,027 acres (New Mexico, 1 lease on 1,925 acres; Nevada, 14 leases on 18,367 acres; Oregon, 9 leases on 5,353 acres; and Utah, 28 leases on 55,382 acres).

At the end of FY 1991, a total of 203 competitive leases were in effect covering 327,232 acres (California, 113 leases on 183,650 acres; Idaho, 2 leases on 3,061 acres; New Mexico, 2 leases on 2,781 acres; Nevada, 52 leases on 87,974 acres; Oregon, 17 leases on 21,998 acres; and Utah, 17 leases on 27,768 acres). A total of 372 noncompetitive leases were in effect as of September 30, 1991, on 583,570 acres (Arizona, 1 lease on 784 acres; California, 29 leases on 30,982 acres; Colorado, 1 lease on 272 acres; New Mexico, 7 leases on 14,136 acres; Nevada, 156 leases on 259,647 acres; Oregon, 139 leases on 202,441 acres; Utah, 38 leases on 73,395 acres; and the State of Washington, 1 lease on 1,913 acres.).

Geothermal Operations

At the end of FY 1991, geothermal production generated 1051 megawatts (MW) of power on or from Federal lands. In California, 725 MW was generated from The Geysers, 123 MW from East Mesa, 78 MW from Coso Hot Springs, 15 MW from Mono-Long Valley, and 8 MW from Wendel-Amedee. In Nevada, 56.40 MW was generated from Dixie Valley, 6.72 MW from Beowawe, 6.24 from Steamboat, 5 MW from Desert Peak, 4 MW from San Emidio, and 7.78 MW from Soda Lake. There is also a direct use plant at Round Mountain. In Utah, 20 MW was generated from Roosevelt Hot Springs and 7.5 MW from Cove Fort.

In California, near the town of Mammoth Lake, the PLES I 15-MW facility began commercial operation in December 1990. Also, expansion is proposed at Coso, Gals Mountain, Lake City-Surprise Valley, and Randsbury Known Geothermal Resource Area, totaling 124 MW. Nevada has power plants under construction at Steamboat and Brady Hot Springs totaling 20 MW on Federal land. Soda Lake generating capability was expanded by 12 MW. In Oregon, the Pacific Northwest Power Planning Council has indicated interest in buying power. This will help stimulate interest in geothermal exploration.

In FY 1991, geothermal leases and associated operations generated about $18 million in bonus, rent and royalty payments to the Federal Government.

Coal

The BLM serves as the focal point of the Department of the Interior's Federal coal program and is responsible for ensuring coordination with State and local governments, industry, conservation groups, and other agencies concerned with the management of Federal coal. The Mineral Leasing Act, as amended and supplemented, FLPMA, and the Surface Mining Control and Reclamation Act of 1977 provide the statutory bases for the Federal coal management program.

The Federal coal lands contain approximately 60 percent of the total Western reserves. Most of these Federal coal reserves are concentrated in six Western States: Colorado, Montana, New Mexico, North Dakota, Utah, and Wyoming. At the end of 1991, there were

- approximately 13.63 billion tons of recoverable reserves on 476 Federal coal leases covering 694,340 acres.
- 133 producing Federal coal leases, which produced 262 million tons. This production represented almost 26 percent of the total United States production in 1991.
- $284 million in Federal coal royalty revenues collected by the Department of the Interior. Coal production on Indian lands totaled about 40 million tons with royalties of over $61 million in FY 1991.

Coal Leasing

During FY 1991, there were 10 coal lease sales—one in Alabama, two in Colorado, three in Kentucky, two in New Mexico, one in North Dakota and one in Wyoming. These sales covered approximately 17,356 acres of land containing approximately 204 million tons of recoverable coal reserves. The sales generated bonus bids of $24.6 million.

In addition, five coal preference right lease applications (PRLA's) in New Mexico and Wyoming were rejected by the BLM, and four were reinstated after appeal to the Interior Board of Land Appeals. This brought to 40 the number of coal PRLA's remaining to be processed. In addition to the above actions, four licenses to mine and eight exploration licenses were being administered by the BLM.

Coal Operations

In the 71 years since the Mineral Leasing Act was enacted, almost 2 billion tons of coal have been produced from Federal land. The market value of this coal was nearly $25 billion, on which royalties exceeding $1.2 billion have been paid to the U.S. Treasury. Since 1920, more than 482 million tons of coal have been produced from Native American Indian lands. That coal was valued at more than $5.2 billion and generated more than $384 million in revenue for Native American Indian tribes and allottees.

The BLM has statutory and regulatory responsibility for oversight of coal mining operations on Federal and Native American Indian land. This

Federal coal lands contain 60 percent of total Western reserves.

responsibility includes providing technical assistance to Indian tribes, allottees, and the BIA, including preparing economic, resource, and mining assessments and analyses; approving exploration and mine plans; supervising exploration, development and abandonment of operations; recommending bonds; and conducting inspection and enforcement and production verification.

An important BLM responsibility on Federal lands is the administration of 29 logical mining units (LMU's). An LMU is a designated area from which coal can be developed as a unit and as part of a single mining operation. An LMU may consist of Federal lease(s) only or of Federal lease(s) and non-Federal land (or Native American Indian land); it must be composed of contiguous lands, and cannot exceed

The BLM manages about one third of the Nation's coal resources, primarily in the Western States.

25,000 acres in size. During FY 1991, the BLM approved three of these 29 LMU's and 14 LMU applications were being processed at the end of FY 1991. During FY 1991, the BLM also processed 39 readjustments of lease terms and conditions and 14 record-title assignments on Federal coal leases.

The primary components of inspection and enforcement (I&E) include ensuring compliance with laws, regulations, lease terms, exploration or mine plans, and all notices and orders; identifying trespass; and conducting production verification (PV). This is the process of independently calculating and certifying mineral production for royalty payment. PV comprises two essential elements: (1) checking reported production against mine and other records using the lessee's method to determine accuracy of production measurement; and (2) making an independent engineering determination using one or more alternate procedures to assess the accuracy of the reported production. The primary goal is to verify the amount of coal being mined and to ensure that production is accurately reported, thereby ensuring that proper royalties are paid for the extraction of coal on Federal and Native American Indian lands.

There is an estimated 2 trillion barrels of oil shale on Federal Lands.

Implementation of national I&E/PV guidelines for coal and other solid minerals is carried out through Solid Minerals Assistance Teams (SMAT's). These teams help promote consistency and help monitor compliance with the guidelines. In FY 1991, a SMAT visited the Pocatello Resource Area Office in Idaho to review mine-specific I&E/PV plans, inspection procedures, and methods of production verification. The significance of production verification will continue to grow as Federal/Indian coal and noncoal royalty revenues increase as a result of expanded production. Several BLM field offices are exploring computerization of production verification procedures and other methods of ensuring accuracy and reliability of production verification.

The BLM continued drafting revisions to the Federal Coal Management Rules (43 CFR Group 3400), which were proposed in the *Federal Register* Vol, 56, No. 134, Friday, July 12, 1991.

The proposed rule would revise provisions of the operations-related portions of the existing Federal Coal Management Program regulations, specifically those regulations relating to exploration licenses, logical mining units, suspensions, lease management, diligence, and exploration and mining operations on leased Federal coal. Most of the changes are administrative and procedural in nature, providing more explicit and coherent direction for situations and conditions not anticipated in existing regulations. Public comment was solicited on all proposed revisions, including a proposed change in the Federal coal diligence provisions.

Oil Shale

The Mineral Leasing Act gives the Interior Secretary authority to lease oil shale on Federal lands. The BLM has responsibility for 80 percent of oil shale concentrated in the Green River Formation in Colorado, Utah, and Wyoming. The reserves in this 25,000-square-mile formation are estimated to be nearly 2 trillion barrels of shale oil. Approximately 731 billion barrels could be recovered with current technology. However, the cost of extraction with present technology makes it noncompetitive against conventional sources.

The only two existing oil shale leases, tracts C-a and C-b in Colorado, were in suspension during FY 1991. The lessees maintained the mines and related facilities and monitored the environmental effects while the leases were inactive.

Oil shale may also be held, worked, and patented under the Mining Law if claim location and discovery of valuable deposits preceded 1920. Currently, there are 1,601 unpatented mining claims for oil shale for 252,117 acres in the States of Colorado, Utah, and Wyoming. Additionally, 381 of these claims in Colorado and Utah totaling 56,822 acres are encompassed in 28 patent applications currently pending in the BLM. Congress moved to place a moratorium on processing mineral patent applications for oil shale mining claims until September 30, 1992.

Solid Nonenergy Leasable Minerals

The BLM also supervises activities of lessees and permittees who explore for, develop, and produce non-coal solid leasable minerals on Federal and Indian lands. At the end of FY 1991, there were 639 Federal leases comprising 687,007 acres, plus 90 prospecting permits covering 64,188 acres. In addition, there were 5 preference right lease applications covering 8,982 acres. The combined production of solid nonenergy leasable mineral commodities from Federal and Native American Indian land was valued at $897 million. More than $34 million in royalty revenues was collected from Federal lands.

On Federal lands, more than 87 percent of the acreage and nearly 80 percent of the leases for solid nonenergy leasable minerals involve potash, sodium and phosphate.

The passage of the 1990 Clean Air Act Amendments, which mandate greatly reduced sulphur emissions, is likely to result in an increased demand for leasing certain nonenergy minerals. It is anticipated that interest in leasing nahcolite will be particularly noteworthy, since nahcolite has been recognized as a promising flue-gas desulfurization agent in coal-fired power plants.

Nonenergy Leasable Minerals Fiscal Year 1991

Mineral	Leases	Acres	Tons Mined	Royalties Paid to Government
Potash	205	330,805	2.4 million	$3.9 million
Sodium	102	122,991	5.2 million	$19.8 million
Phosphate	128	79,432	4.4 million	$3.4 million

Other Nonenergy Leasable Minerals with FY 1991 Production on either Federal or Native American Indian Lands

Mineral	*State(s)*
Bentonite	Wyoming
Chat	Oklahoma
Clay	Alabama
Copper	Arizona, Missouri
Garnet	Idaho
Gilsonite	Utah
Iron Ore	Minnesota
Langbienite	New Mexico
Lead	Missouri
Leonardite	North Dakota
Limestone	Oklahoma, Virginia
Magnesium	Utah
Quartz Crystals	Arizona
Sand and Gravel	Arizona, California, Montana, New Mexico, Nevada, Washington, and Wyoming
Silica Sand	Arizona
Sulphur	Alabama, Montana, North Dakota, New Mexico, and Wyoming
Trona Ore	California, Wyoming
Zinc	Missouri

There are 639 Federal leases for noncoal solid leasable minerals—mostly potash, sodium and phosphate—covering 687,000 acres.

Trona Mine: Over 90 percent of the Nation's supply of trona comes from the BLM mineral estate. Trona is an important ingredient in detergent, glass, and other common products.

The BLM believes that Federal land managers can use existing regulatory frameworks to solve almost any environmental issue arising from the Mining Law.

Mineral Materials

The BLM's mineral materials program, also referred to as the salable minerals program, began with the passage of the Minerals Act of July 31, 1947. In 1955, Congress amended the Act by specifying that common varieties of previously locatable minerals, such as sand, gravel and stone, were to be disposed of under the provisions of the 1947 Act. Since that time, the BLM has disposed of mineral materials either by sale to the general public or by free-use permit to qualified government or non-profit organizations as provided in the Act. In FY 1991, over 5.3 million cubic yards of mineral materials, valued at approximately $3 million, were produced from 2,560 sales and free-use permits.

Mining Law

The Mining Law of 1872, as amended many times in its 119-year history, serves as the statutory basis for the disposition of locatable minerals from Federal land. This law embodies four fundamental principles: self-initiation of exploration and development, free access to and across Federal lands, security of title to the mineral deposit(s), and the concept of due diligence. Federally owned locatable minerals include valuable deposits of precious metals, base metals, strategic and critical minerals, industrial minerals such as cement-grade limestone, bentonite, uncommon varieties of building stone and other minerals. Mining claims also exist for sand and gravel and other common varieties located prior to the 1955 Congressional amendment of the Materials Act of 1947.

Approximately 80,861 new claims were accepted for recording by the BLM during FY 1991, which is a decline of about 17 percent from the previous year. The BLM issued 26 patents for lode, placer and millsite claims, for a total of 3,965 acres.

Under the mandates of FLPMA, the BLM must provide for exploration, development and extraction of energy and mineral resources under multiple-use management, while preventing unnecessary or undue degradation of the public land. The BLM asserts that Federal land managers can use the existing Federal, State, and local regulatory framework to solve almost any environmental issue. Legislation is pending in both the House of Representatives and the Senate to amend the Mining Law of 1872. The BLM has initiated an aggressive surface management program to correct abuses of the 1872 Act and to demonstrate how problems can be resolved under the existing mining statutes.

LANDS PROGRAMS

Lands and Realty Management
Withdrawals
Public Access
Acquisition
Rights-of-Way

Recreation
Cultural Resources
Wilderness
Alaska Programs

The BLM's Lands programs provide lands and realty service consistent with multiple-use management to meet public needs, support other Federal programs, and provide access to information on land status and use through public information rooms and automation.

The BLM manages over a billion public land records.

Lands and Realty Management

The Lands and Realty Management Division processes land use authorizations (Recreation and Public Purpose leases, issuance of patents, commercial leases, permits and entries), exchanges land to consolidate public ownership of resources for protection of high value areas, to improve resource management, and to reduce land management costs, conducts public land sales, maintains automated official public lands records for the Federal Government, and responds to public inquiries about public lands.

In 1991, the BLM
• Adjusted ownership of over 197,000 acres of State and Federal land to enhance riparian and wildlife habitat areas in Arizona;
• Consolidated Federal lands along the Marys River in Nevada, habitat for the Federally-listed Lahontan Cutthroat Trout;
• Sold over 6,000 acres of public land to Clark County, Nevada, for the expanding community in the Las Vegas Valley.

Withdrawals

The Withdrawal Processing and Review branch responds to Federal needs to withdraw public lands to protect valuable resources or provide for special use such as the military, processes Alaska Lands Withdrawals, and reviews all public land withdrawals to ensure that there are no unnecessary closures to appropriate public land uses.

In 1991,
• The Secretary of the Interior approved 39 withdrawals, encompassing 625,095 acres in 12 States to protect archaeological, geological, paleontological, recreational, botanical and administrative sites. Sites protected by these withdrawals include the BLM National

Historic Oregon Trail Interpretive Center, Forest Service Research Natural Areas, a dam and reservoir project, and a National Guard Armory. About 446,900 acres of the total withdrawn in 1991 is the underlying mineral estate of two national wildlife refuges.

• The Secretary of the Interior approved 35 revocations of withdrawals encompassing 8,630 acres. The purpose was to make the lands available for other uses, such as exchanges. Of this total, about 4,856 acres in Alaska were revoked to allow selection of the lands by the State of Alaska or Native groups.

The BLM acquired 135 easements in 1991 to provide access to public lands.

Public Land Access

This branch acquires legal rights (easements for road and trail access) for public access on non-Federal lands for appropriate uses essential to implementing planned BLM resource management programs such as timber harvest; provides public access to areas designated as valuable for public recreation uses (such as special recreation areas, national hiking trails, wilderness/wilderness study areas, or wild and scenic rivers); and provides access to large blocks of public land currently unavailable to the public.

In 1991,

• 135 easements were acquired to provide access to public lands in support of the BLM's wildlife, recreation, and timber programs.

Land and Water Conservation Fund (LWCF)

The LWCF program acquires non-Federal land having significant resource and public values, acquires interest on non-Federal land and consolidates public land ownership patterns to provide optimum protection and management of critical ecosystems that provide irreplaceable resources of national significance.

Land Exchanges

Preference is for exchanges of public lands having private development potential for private land containing significant resource value and for exchanges that carry out specific projects authorized by Acts of Congress. Emphasis is on improving management and uses of public lands as approved within a land use plan and concurred with by Congress.

In 1991, the BLM

• Used the LWCF to acquire nearly 30,000 acres of land to enhance the BLM's recreation and conservation programs.

• Also acquired 197,000 acres during 1991 through land exchanges in addition to property acquired with LWCF.

Rights-of-Way

One of the more frequent uses of public land is for the construction of transportation, storage, and communication facilities. The BLM authorizes and manages such use through right-of-way grants, permits, and leases. Types of facilities and uses authorized include petroleum pipelines and related facilities; water lines; electrical transmission lines; roads; telephone lines; communication sites for radio, microwave, and other broadcast facilities; and hydropower projects.

In 1991, the BLM

• Issued 2,743 new right-of-way grants and 1,183 new permits and leases.

• Amended, assigned, modified or terminated over 2,600 existing grants.

• Collected nearly $6 million for use authorization and nearly $4 million in cost recovery fees. (Holders of right-of-way grants pay fair market value rental for the use of the public lands unless specifically excluded by law or regulation. Applicants for a right-of-way also pay part of the application processing cost.)

Automation

As part of the BLM's automation initiative, the Lands and Realty Program is sponsoring two projects that are essential to providing quality data for managers to make key land management decisions. The Release 2.0 project will enhance the BLM's capability to track lands and minerals case files such as granting rights-of-way or issuing mineral leases. The Data Collection/Validation project will provide the tools to enhance the quality of lands, minerals and legal description data.

Recreation

The BLM's recreation initiative seeks to expand opportunities for Americans to enjoy many types of recreation on public lands.

While the BLM remains committed to serving its traditional constituents, efforts to direct the agency's focus toward achieving a better balance in its management programs are well under way. A critical element of this effort is the implementation of the BLM's long-range recreation initiative, *Recreation 2000: A Strategic Plan,* designed to provide the widest diversity of recreation opportunities on BLM-administered lands.

FY 1991 Statistical Highlights

Visitation reached 96 million in 1991, a 34 percent increase over FY 1990. Other recreation use records were broken in 1991, as shown in the following table, proving that the BLM's recreation program has tremendous potential for growth as more and more Americans seek less crowded public spaces.

Visitation	**1991**	**Change**
Visitors for Recreation	96 Million	+ 34 percent
Recreation Hours	539 Million	- 3 percent
Camping/Day Use Permits	94,376	+ 21 percent
Special Rec. Permits	14,839	+48 percent

Fees and Savings	**1991**
Fees Collected	$1.8 Million
Volunteers	8,484
Volunteer Hours	467,000
Savings	$3.8 Million
Contributed Funds	$5 Million

Trails and Access	**# of Trails**	**Miles**
Hiking Trails	787	5,948
Equestrian Trails	617	5,272
Mountain Bike Trails	505	5,848
Motorized Vehicle Trails	1,890	19,285

Recreation 2000
Up and Running

• Provides visitor services, information and interpretation

• Protects vital recreation resources

• Expands outreach efforts to promote the program

• Establishes cooperative partnerships

The following highlights activities in 1991 in nine major categories.

46 Byways, almost 2,254 miles, have been dedicated through 1991.

Back Country Byways
is the BLM component of the National Scenic Byways program. A total of 46 Byways (almost 2,254 miles) have been dedicated through 1991.

The purposes of the program are to provide opportunities for scenic driving; tell BLM's multiple use story; and assist rural economies in enhancing tourism opportunities. Each BLM State Office has identified at least two routes to be included in a National Back Country Byways program. Three National sponsors support the BCB program: American Recreation Coalition, Farmers Groups of Insurance Companies, and Isuzu Motor Company. In addition, a national MOU supporting the BCB program was signed by the BLM and the American Motorcyclist Association in 1991.

The BLM participated in 30 National Fishing Week events in 1991.

Adventures in the Past
is designed to provide opportunities for the public to learn about their past, the wide diversity of cultural resources located on BLM lands, and the need to protect our fragile cultural heritage.

1991 accomplishments are described in the Cultural Resources section, p. 34.

Watchable Wildlife
provides opportunities to view wildlife, promotes learning about wildlife needs, and fosters public support for wildlife conservation and management.

In FY 1991,
• a new *Watchable Wildlife* viewing guide was produced for Wyoming, adding to those already produced for Oregon, Utah, Idaho, Montana and Colorado under a National MOU between the BLM, other Federal land management agencies, State wildlife agencies, and national conservation organizations.

Bicycling
promotes both mountain biking and bicycle touring

In 1991, the BLM
• Formed an agency/user task force to develop mountain biking policy and explore ways to create partnerships.The BLM also participated in several "rails to trails" conversions and the development of State and regional tour maps.

Local 1991 projects
• Recreation facilities were added to portions of Kokopelli's and the Moab Slickrock Bike Trail in Utah.
• The Wood River Trail System and the Sun Valley Trails in Idaho were expanded.
• The Tabeguache and Colorado-Midland mountain bike trails were opened in Colorado.

Recreational Fishing
A cooperative effort between the BLM, the Forest Service and the recreational fishing industry, this program is directed at improving recreational fishing opportunities on the public lands by enhancing fisheries habitat; securing better public access (with a special emphasis on improving fishing access for people with disabilities); and encouraging angler ethics and appreciation of aquatic resources through resource education and interpretive programs.

In 1991, the BLM,
• Participated in 30 National Fishing Week events, attracting over 3,700 people.
• Improved access to many fishing areas, and provided anglers with new maps and guides to key fishing sites.
• Cosponsored special "Kids Fishing Days," and a Congressional fishing tournament on the Potomac River in Washington, D.C.

Rural Tourism

is designed to broaden and enhance the economic base of rural communities located on or adjacent to BLM public lands.

Key elements include increasing adventure travel opportunities such as white water rafting, guided tours and wilderness vacations to enhance and assist local business opportunities; increasing other types of recreation opportunities such as mountain biking, rock climbing, off-highway vehicling, and caving; working with groups to design information brochures, guides, and maps; and developing or improving recreation facilities.

In 1991, the BLM

- Co-sponsored two national-level meetings on tourism development.
- Produced statewide travel/recreation maps for New Mexico, Colorado, and Oregon in cooperation with Federal and State tourism agencies.
- Provided recreation information accessible through home computers and national travel publications, working in cooperation with the private sector travel industry.

River Management

The BLM is a leader in river management in the West. The BLM administers 32 rivers and 2,000 miles, or one-fifth of all wild and scenic rivers in the National Wild and Scenic Rivers System.

In 1991, the BLM

- Produced a comprehensive map of the National Wild and Scenic River System working in cooperation with the U.S. Geological Survey, NPS, FWS, and the Forest Service.
- Has taken a leadership role in river management by working closely with commercial and noncommercial operators and river management groups to produce an Interagency Western River Digest and cosponsor national meetings such as Confluence '91.

Off Highway Vehicles (OHV)

OHV travel is a major land use activity. The BLM is recognized both nationally and internationally as a leader in the management of OHV recreation.

The BLM manages over 19,000 miles of formally dedicated OHV trails and another 53,000 miles available for OHV use. Management efforts are directed at vehicle use designations, operation of special OHV recreation areas, and improving OHV user safety and land ethics. The BLM is a charter member of the national "Tread Lightly" campaign and was the first to enter into partnership with the OHV industry to provide safety and outdoor ethics training to all-terrain vehicle (ATV) users.

Cave Management

The BLM administers lands containing 883 known caves scattered throughout the Rocky Mountain States from Montana to New Mexico. Of these, the BLM manages recreation use of 173 caves. Many BLM caves, such as Horsethief Cave in Wyoming, are attributed national and international significance by the spelunking community.

The BLM provides more opportunities for recreation than any other single Federal agency.

Cultural Resources

The BLM is steward for the largest number of cultural resources, archaeological and historic properties, of any Federal agency.

It is estimated that as many as 4 million cultural sites may exist on the total 270 million acres managed by the BLM.

Cultural resources on BLM lands span the entire 12,000 years of human presence in the New World. The BLM enjoys greater geographic variety of land holdings than any other Federal agency, which in turn contributes to a greater variety of archeological and historic sites. This provides unparalleled opportunities for tracing and understanding cultural development through time and space on the public lands.

Already, more than 160,000 archaeological and historic sites have been recorded on 9.4 million intensively inventoried acres of public lands. It is estimated that as many as 4 million sites may exist on the total 270 million acres managed by the BLM.

Statutory Authorities

Various statutory authorities, most importantly FLPMA, the National Historic Preservation Act (NHPA) of 1966, as amended, and the Archaeological Resources Protection Act of 1979 (ARPA), as amended, require the BLM to locate, evaluate, and manage its cultural resources; protect its most important and critically threatened cultural resources to pass them unspoiled to future generations; preserve and account for archaeological and ethnological collections taken from the public lands; manage its cultural resources for their widest range of public benefits, including recreation, education, and scientific study; and promote partnerships and volunteerism to involve the public in inventory, interpretation, site monitoring, excavation, and stabilization.

In FY 1991, cultural resource management responsibilities were augmented by the recently passed Native American Graves Protection and Repatriation Act (P.L. 101-601) and the National Park Service's recent curation regulations in 36 CFR part 79. Among other things, they will require the BLM to locate archaeological and ethnographic collections legally taken from the public lands in the last 85 years and determine their importance to Native Americans, obtain a catalog of the contents of the collections, account for the contents and condition of the collections, inspect curation facilities, determine the geographic and cultural affiliation of the collections, consult with Native Americans on the issue of repatriation, resolve competing ownership claims, and repatriate collections. Only 4 years remain to complete much of this work.

Public Awareness Programs

Theft of cultural resources increased with the economic downturn in 1991. Congress has acknowledged that the Federal Government has an obligation to assure that these resources are not stolen or destroyed. For this reason, when Congress amended the ARPA in 1988, it required Federal land managers to establish programs ". . . to increase

public awareness of the significance of the archaeological resources located on public land and Indian lands and the need to protect such resources." This not only carved out a leadership role for the Federal Government, but it also placed ultimate responsibility on the American public to safeguard the Nation's cultural legacy. The BLM is responding with a public awareness campaign designed to enlist support of the American people primarily through cultural resources education and public involvement.

Adventures in the Past

Adventures is the BLM's strategy for promoting this approach. Its goals are to increase the public's enjoyment of cultural resources, demonstrate that the BLM is a good steward of these resources, and reduce their destruction.

Adventures responds directly to President Bush's *America the Beautiful* goals of protecting and preserving America's treasury of public land resources, including archaeological and historical resources, and greatly enhancing people's access to them.

Adventures is being brought to the public through a series of public and media oriented regional and thematic events. The first two, the"Four Corners Tribute" and the"Great Basin Tribute," took place in 1990 and 1991.

A "High Plains Tribute" is planned for 1992, and thematic events for 1993 include the "Columbus Quincentennial" and the "Oregon Trail Sesquicentennial."

Through *Adventures*, the BLM is
- Expanding the number of interpreted sites available to the public;
- Promoting rural economic development by showcasing resources with tourism potential;
- Emphasizing on-site presence of BLM personnel;
- Promoting President Bush's and Secretary Lujan's education goals;
- Providing ethnic and minority groups with a focus of identity; and
- Producing anti-looting public service announcements.

Heritage Education

The Heritage Education Initiative was launched in 1991 to use the vast archaeological and historic resources under the BLM's custody to support the education of America's children and to strengthen children's sense of personal responsibility for the stewardship of these resources. By drawing on the intellectual excitement inherent in the study of archaeology and history, the BLM hopes to capture the attention of young people at an early age, sustain their interest through hands-on activities, and involve them in increasingly more sophisticated learning experiences.

Volunteers and Cooperation

Tthe BLM's cultural resource management program has over 70 challenge grant and cooperative management agreements in place. Cooperators contributed almost $1.5 million with the BLM investing just under $300,000. Additionally, more than 50 work-years valued at $1 million was contributed, bringing the total to $3.5 million. This boost significantly expanded the BLM's ability to manage and protect cultural resources, and represents about a 25 percent expansion of the BLM's total budget for the program, which is roughly $9.6 million for FY 1992.

Cultural Resource Use Permits

In FY 1991, the cultural resource staff devoted between 70 and 75 percent of their time to compliance with section 106 of the National Historic Preservation Act in response to roughly 10,000 land use applications. As a result of these numerous land use applications, more than 7,000 new cultural resource properties were recorded in FY 1991, and data recovery was undertaken on about 500.

Site Management and Protection

The BLM devotes approximately one-third of its operating cultural resource management budget to site management and protection. Activities included fencing, maintaining, patrolling, and monitoring more than 6,000 archaeological and historic properties, and installing interpretive and protective signing on more than 300 properties. Among the properties receiving protection were the more than 3,200 National Register of Historic Places properties, including the 23 National Historic Landmarks and 5 World Heritage properties formally recorded on the public lands.

Looting and wanton destruction continue to erode and diminish the Nation's precious cultural legacy.

Wilderness

The United States is the first Nation to set aside pristine wilderness areas for protection in their natural state

The BLM, FWS, NPS and Forest Service together manage 95 million acres of designated wilderness.

The BLM currently manages 66 wilderness areas in 9 States totaling 1,610,995 acres.

Thirty-eight new BLM wilderness areas were added to the National Wilderness Preservation System with the Arizona Desert Wilderness Act signed November 28, 1990 (Public Law 101-628). The law also added new acreage to the Aravaipa Canyon Wilderness Area. Seven of the BLM wilderness areas are jointly managed by the BLM and the Forest Service.

15-year Study Completed

The BLM completed final wilderness reports in 1991 documenting BLM statewide wilderness recommendations. The reports were drawn from extensive studies of over 26.5 million acres in 745 areas conducted by BLM staff over the past 15 years, and completed on the FLPMA deadline of October, 1991. Based on these reports, the Interior Secretary has recommended to the President new wilderness designation for almost 10 million acres of BLM land in California, Idaho, Montana, New Mexico, Colorado, Nevada, Oregon, Utah, Arizona and Wyoming. The California recommendations are now being considered by Congress as H.R. 3066.

Wilderness Management Plans have been completed for 14 wilderness areas. Draft plans for three areas have been released, and plans have been started for newly designated areas in Arizona.

Wilderness Study Areas

The BLM continues to provide interim management for 773 wilderness study areas (WSA's) to assure that wilderness values in these areas are maintained until Congress decides which areas should be designated as wilderness and which should be released for multiple-use management. The interim management program involves surveillance and signing of more than 26.5 million acres of public land in WSA's with more than 28,000 miles of boundary. In addition, the BLM continued public information initiatives to ensure that public land users were aware of special management requirements for WSA's.

Alaska Lands Program

Over 90 million acres of public lands are managed by the BLM in Alaska, including

- 952 miles of Wild and Scenic Rivers;
- 133,000 miles of anadromous fish streams;
- 3.8 million acres of lake habitat;
- the only reindeer grazing permits in the Nation;
- 2,400 miles of Iditarod National Historic Trail;
- Oversight of the 800-mile Trans-Alaska Pipeline;
- Management of the Federal lands along the Dalton Highway, the only road to the North Slope and Prudhoe Bay;
- 27,000 active mining claims; and
- The largest land survey and titling operation in the world.

Alaska-Canada Highway Turns 50
The BLM is preparing for tourism-related events associated with the 1992 celebration of the 50th anniversary of the construction of the Alaska-Canada Highway. Interpretive sites and extra camping facilities are being prepared. Sourdough Campground on the banks of the Gulkana Wild and Scenic River is being upgraded to accommodate elderly and handicapped visitors. Interpretive centers and rest stations are being built at key points along the Dalton Highway. Plans for an environmental center at the Anchorage Campbell Tract facility are also being finalized.

Largest Land Operation in the World
Land and land survey/conveyance programs continue to account for a large portion of the BLM-Alaska's workload. More than 1.1 million acres were patented or interim conveyed to the State in FY 1991. Remaining State selections must be completed by 1994. To completely satisfy State of Alaska entitlements, BLM-Alaska must survey and provide patent to another 68.5 million acres. Native claims settlement will require surveying and patenting an additional 35.5 million acres. In 1991, applications for over 600 Native allotments were processed.

Over 90 million acres of public lands are managed by the BLM in Alaska.

Support Services

Engineering
Planning & Research
Fire Management
Law Enforcement
Hazardous Materials
Cadastral Survey
Volunteers
Information Resources

BLM engineers maintain and build roads, trails, campsites, office buildings, shops, warehouses, visitor centers, water and sewer systems, bridges, and more.

Engineering

When the BLM was established in 1946, it inherited its physical facilities from its parent agencies, the General Land Office and the Grazing Service, along with a primitive road system that reflected the miscellaneous needs of ranchers, mining companies, railroads and county and State governments. Since the mid-1960s, the BLM has constructed numerous roads and trails necessary for administration of the public lands. Where suitable leasable offices and other facilities are not available, the BLM has constructed its own office buildings, warehouses, shops and other facilities tailored to the Bureau's resource management responsibilities.

In FY 1991, the BLM continued work on the Alaska Fire Service building, the Flagstaff Hill Visitor facilities, the Yaquina Head Road in Oregon, Quail Hill Road in Arizona, and sanitary facility upgrading at various recreation sites in Montana, as well as other smaller construction projects. Maintenance projects such as major road and recreation site work and building repair work also were done. The BLM completed data gathering for the maintenance inventory and condition survey program. This data will be used to distribute funding to the field in FY 1992 and as a basis for requesting funding in FY 1993.

The BLM provided maintenance to about 150 office buildings, more than 1,000 other BLM-owned buildings and associated water and sewer systems, approximately 800 developed family unit recreation sites, 5,000 undeveloped (without water) sites, approximately 20,000 miles of roads, more than 1,500 miles of trails, and 50 bridges.

Additional support was provided through survey and design of various range improvement and watershed construction projects. The BLM continued its dam inventory and hazard assessment programs in FY 1991.

Planning

The FLPMA provides for the development and use of land use plans for the public lands. Special emphasis is placed on public participation. BLM planning regulations (43 CFR Part 1600) establish resource management plans (RMP's) as the agency's basic planning document. An environmental impact statement is prepared with each RMP to meet the requirements of the National Environmental Policy Act of 1969. Other legislation containing planning requirements includes the Federal Coal Leasing Amendments Act of 1976, the Surface Mining Control and Reclamation Act of 1977, and the Public Rangelands Improvement Act of 1978.

Planning helps the local BLM manager, public land users, and others resolve resource management conflicts and land use issues. The BLM seeks to improve resource management decisions on public lands through a planning process that includes participation by the public and Federal, State and local governments; use of the best available data; and analysis of alternatives. Resource management plans are designed to guide and control management actions relating to the increasingly competitive demands for public land, while at the same time protecting and ensuring their long-term productivity.

Sixty-seven RMP's had been approved by the end of FY 1991. Thirty-seven more were under way. With 67 plans completed, the BLM is placing increased emphasis on plan implementation, monitoring, and maintenance.

Areas of Critical Environmental Concern

FLPMA requires that the BLM give priority to the designation and protection of Areas of Critical Environmental Concern (ACEC). Such areas are designated to protect and prevent irreparable damage to important historic, cultural, or scenic values; fish and wildlife resources; or other natural systems or processes; or to identify natural hazards. Natural areas may also be designated under FLPMA to maintain natural diversity and provide for scientific research.

ACEC's are identified and designated through the BLM's planning process. Appropriate management actions for each area are developed and tailored to reflect site-specific resources and local circumstances. Protection of the identified values is ensured whenever subsequent uses are undertaken or authorized.

During FY 1991, 39 ACEC's were designated. This raised the amount of public lands accorded this designation to more than 8.3 million acres and reflected BLM's vigorous commitment to the appropriate use of this designation and management authority.

Research

To meet its commitment to manage the resources of the public lands within a framework of environmental responsibility and scientific technology, the BLM has recognized the need to strengthen its research efforts. In 1991, a *Research and Development Strategic Plan* was prepared to serve as a framework for improved management of the public lands through better use of science and technology. The plan also will help the BLM accommodate the growing emphasis on global environmental issues and to incorporate proven technological developments into its management program.

New research is necessary to assure that technologically sound ecological principles are applied to the conservation of the Nation's resources.

The BLM's research efforts primarily are conducted through contracts and agreements with other Federal and State agencies and universities. Notable exceptions are cooperative research centers that recently have been established in Colorado, Idaho and Oregon where specific long-term research needs are being addressed.

The Center at Colorado State University is focusing on wilderness and environmental monitoring with global change issues being of particular concern. The Center at Boise State University in Idaho is primarily concerned with raptor ecology and management on public lands in the western United States. The newest center, located in Corvallis, Oregon, at Oregon State University, was established in 1991 to address pressing research needs associated with maintaining the health and productivity of western Oregon forest

and northern Great Basin rangeland communities. These three centers are expected to make major contributions during this decade to help the BLM manage the public lands.

Fire Management

Range, forestry, wildlife, and other programs benefited from prescribed fires on over 35,000 acres in 1991.

The National Fire Plan for the BLM was approved in the spring of 1991. The plan incorporates State and District Plans. District plans were derived from existing land use plans and reflected the most efficient fire management program to meet land use objectives.

Research initiatives investigating a wide spectrum of fire issues will be funded beginning in FY 1992.These initiatives were developed in conjunction with other Department fire programs.

Prescribed fire continued as an integral part of the fire management program. In 1991,the Range, Forestry and Wildlife programs accounted for 35,648 of the 40,268 acres burned.

The number of wildfires on BLM administered lands decreased slightly in 1991 and the total acres burned were greatly reduced from 1990. In FY 1991, 1,890 fires occurred, burning 562,699 acres, of which over 480,000 were in Alaska. This reduction was due primarily to a series of wet storm fronts which softened initial attack and reduced the potential for excessive rates of spread.

All wildfire agencies reported similar reductions in fire severity and as a result, more fires were contained by initial attack and did not require as much outside support. The National Interagency Coordination Center (NICC) at the Boise Interagency Fire Center (BIFC) responded to 225 fires, down from 784 during 1990. The total number of fires reported to NICC from all agencies was 75,754 with a burned acreage of 2,953,578.

Moderate activity occurred in the Great Basin and the Northern Rockies during much of the fire season. September brought drier conditions and above normal temperatures, but it was during the later portion of October that the majority of the activity occurred. During this period, fire overhead teams were committed in the Northwest, Northern California, Northern Rockies, Rocky Mountain, Great Basin and the Southern Areas, the latter of these being of longest duration, lasting into November.

Prescribed fire is an integral part of the fire management program.

Law Enforcement and Resource Protection

The BLM's law enforcement and resource protection program began in 1976 with the passage of FLPMA. That Act directs the BLM to enforce laws and regulations relating to the public lands and its resources and to protect the lives and safety of the people who use the public lands.

In addition to FLPMA, the BLM enforces provisions of other laws including the Archaeological Resources Protection Act (ARPA), the Wild Horse and Burro Act, the Wilderness Act, and the Wild and Scenic Rivers Act.

The BLM employs special agents and law enforcement rangers to enforce the laws on the public lands. In addition to their formal education, all law enforcement personnel hired by the BLM are required to complete intensive law enforcement training courses at the Federal Law Enforcement Training Center in Glynco, Georgia.

The BLM's special agents, or criminal investigators, deal with serious crimes on the public lands. Special agents investigate criminal law violations using such techniques as surveillance, undercover work, and electronic monitoring.

The BLM's rangers are the uniformed law enforcement presence on the public lands. Enforcing laws applicable on public lands, and apprehending those who violate the laws, are the main focus of a ranger's job.

In FY 1991, BLM special agents and law enforcement rangers continued efforts with other Federal, State and local agencies to eradicate illegal drugs from public land in California, Oregon and other Western States. The value of illegal drugs seized by the BLM in 1991 exceeded $260 million. BLM rangers confiscated 185 weapons, 32 vehicles, 3 boats, and $516,000 in cash in the line of duty. Over 19,000 marijuana plants were seized, along with 715 pounds of cocaine, 22 pounds of amphetamine, and 3 units of LSD in 1991.

The BLM also increased its efforts to enforce ARPA by emphasizing the investigation of destruction, theft, and sale of archaeological artifacts.

The value of illegal drugs seized by the BLM in 1991 exceeded $260 million.

Hazardous Materials

The Hazardous Materials Management Program's goals are the protection of public health, safety and the environment; ensuring compliance with applicable laws; and the control of Federal costs and liability.

The program is based on the requirement for compliance with the Resource Conservation and Recovery Act, as amended, which establishes standards for the treatment, storage and disposal of all solid and hazardous wastes; the Comprehensive Environmental Response, Compensation and Liability Act, as amended, which assigns liability for cleanup of spills and abandoned waste sites; and other Federal and State laws that regulate the management of hazardous materials.

During FY 1991, the hazardous materials management program was greatly decentralized to provide more on-site capability and was expanded in all BLM State Offices. Field officials were involved in more than 100 emergency hazardous substance cleanups on the BLM public lands. A number of these were removals conducted by the responsible parties at the BLM's direction or conducted jointly by the BLM and responsible parties.

Significant accomplishments for the year included expanding inventories to identify or confirm the presence of hazardous materials on public lands. A total of 45 additional compliance audits were conducted at landfills on public lands. The BLM also conducted preliminary assessments and site inspections

The BLM is seldom either a generator or transporter of hazardous substances.

and continued the Remedial Investigation/Feasibility Study (RI/FS) contract at the Lee Acres Site in New Mexico and initiated two more RI/FS's in Washington and Idaho.

The National Academy of Engineers continued to evaluate the BLM program in FY 1991. The BLM formed partnerships with regulatory agencies to identify and conduct appropriate levels of risk assessments at potential hazard sites on public lands and provide technical support to other programs in compliance with hazardous materials laws and liability control. The BLM expanded partnerships with industries to accomplish cleanups of several large hazardous material release sites in seven BLM States in FY 1991.

It should be noted that the BLM's potential liability for nearly all hazardous materials sites derives from private, or State or local government uses of public land. The BLM is seldom either a generator or transporter of hazardous substances or a hazardous waste facility operator. However, the EPA cannot spend Superfund monies to clean up sites on Federal lands. This limitation of EPA makes it imperative for the BLM to find financially viable responsible parties to clean up the problems that those parties created.

In FY 1991, the program supported three major new initiatives.

(1) The first was to decentralize program operations to the field units.

(2) The second initiative was a continuing expansion of the BLM's training activities in hazardous materials management to create a full curriculum of awareness policy, and technical courses to improve compliance with hazardous materials laws and provide technically capable personnel.

(3) The third initiative included promulgation of a waste minimization policy and an implementation system to shift focus from pollution control to pollution prevention throughout the BLM.

Safety

BLM employees, and to a lesser extent volunteers, can be exposed to a number of risks on the job, ranging from wildland firefighting (the most hazardous occupation) to low level aircraft operations; search and rescue or law enforcement activities; oil, gas, and geothermal steam drilling and production; mining operations; and hazardous materials management. Extremes in weather and terrain also can threaten employees and visitors alike.

The BLM's Safety Management program provides resources to enable all BLM offices to reduce and eliminate job related accidents and illness, protect BLM facilities, and promote visitor safety on public lands. The BLM implements a number of Federal, State and local laws, codes and regulations relating to safety, occupational and environmental health, fire prevention, and motor vehicle safety. These include the Federal Occupational Safety and Health Act, national fire codes, and American National Standards Institute (ANSI) codes, as well as Departmental safety and health regulations.

The BLM conducts formal technical procedures reviews of safety programs in four States and safety inspections of all facilities annually. The BLM also has entered into agreements with the U.S. Public Health Service to develop and implement the Occupational Safety and Health Administration's hazard communication standard to inform all employees of any hazards posed by materials they work with, and to provide protective measures and medical exams where appropriate. The BLM also is implementing an employee health monitoring program for those who may be exposed to hazardous materials.

Cadastral Survey

Surveying the Public Lands
Under 43 USC 2 and 751, the BLM's professional land surveyors execute cadastral surveys of the Nation's 270 million acres of public lands. While much of the work involves resurveys (where original monumentation has weathered away or has been destroyed), significant original survey work is accomplished, mostly in Alaska and on Indian Trust lands.

The survey plats and accompanying field notes are of critical importance to the BLM's natural resource managers as they fulfill their stewardship responsibilities. Effective management of recreation, wilderness, timber, mineral, range, and cultural resources requires the precise delineation of legal boundaries provided by the BLM's land surveyors. Resurveys must protect any valid existing private rights that may exist. The records are also equally important to the BLM's information resource managers, as survey data extracted from the official records constitutes one of the seven basic themes of the Automated Land and Mineral Record System (ALMRS).

Recent advances in surveying, mapping, and computing technologies have significantly expanded the traditional definition of surveying, and have offered land surveyors opportunities to deliver their services more efficiently and effectively. For example, cadastral surveyors have combined geodetic techniques with surveying methods to assist the Geological Survey in a scientific investigation of subsidence of the Bonneville Salt Flats. The study arose from concerns expressed by recreation managers that nearby mining activities might be adversely affecting traditional uses of the area for car racing. The resulting hydrographic survey will answer many of these concerns and will serve as a model for future multidisciplinary endeavors.

As a result of these and other "boundary spanning" activities, Cadastral Survey is changing to meet new expectations. It will, however, continue its traditional mission of surveying miles of boundary and setting monuments. It is anticipated that fewer miles and monuments will be accomplished in the coming fiscal years as program managers ask for surveys of "problem areas" where land use patterns are complex and resource values are high.

Reimbursable Cadastral Surveys
The Cadastral Survey division supplies reimbursable survey services for a number of Federal agencies. These services are coordinated through each State Office's convening Interagency Cadastral Coordination Council (ICCC), where survey requests are reviewed and prioritized on an interagency basis. Eleven of the twelve State Offices participated in these meetings in 1991.

The most active are the Forest Service and the Bureau of Indian Affairs, each of which provides more than $2 million

The BLM provides surveys on the 270 million acres of public lands managed by the BLM and reimbursable survey services to a number of other Federal agencies.

annually. To a large extent, survey services are delivered to them through special "project offices," which are 3-year fixed term offices located in close proximity to the survey work being done and staffed by permanently assigned BLM land surveyors. Substantial savings in travel and per diem costs are realized by this arrangement, which allows more miles of survey to be accomplished within a given budget. The surveyor also acquires a thorough knowledge of local survey history, often difficult with non-project office crews.

Over 5,500 miles of surveys or resurveys were run in 1991.

In order to improve delivery of service to its reimbursable customers, the Division of Cadastral Survey is employing Total Quality Management (TQM) techniques in several State Offices. For example, the Montana State Office is building TQM into its budget submissions. In California, cadastral has asked its clients to complete a questionnaire which will measure their level of satisfaction with the survey work. The Division of Cadastral Survey is initiating a review of the cost structure of the reimbursable survey programs to ensure that billed costs reflect actual survey costs.

The BLM maintains all official Public Land Survey System records covering 30 States. Because private surveyors are constantly making resurveys and subdivisional surveys, these records are in steady demand as the basis for the new surveying, even in States which have long since ceased to be public lands States.

Accomplishments

Accomplishments during Fiscal Year 1991 included 821 miles of original surveys in Alaska and 20 miles of original surveys in the lower States; 3,323 miles of resurvey in the Lower States; 1,400 miles of special surveys in Alaska and 36 miles of special surveys in the Lower 48 States.

Volunteers and Other Contributions

BLM volunteers contributed almost $11 million worth of services in 1991.

Volunteer services, as authorized by the FLPMA, continued to steadily increase during FY 1991, with a 21 percent growth over FY 1990.

Volunteers serve the BLM in diverse ways. They improve habitat for fish and wildlife, serve as trail and river guides, build or maintain trails and campgrounds, improve range and forestland by planting trees and other vegetation, conserve soil and water resources by improving watersheds, perform mapping, research and other tasks to support mineral and energy planning and development, and assist with administrative support by operating computers and other office equipment.

FY 1991 volunteer statistics include the following:

- Volunteers contributed 918,460 hours of work, 14 percent more than in FY 1990.

- Contributed services were valued by the BLM's field managers at more than $10.9 million, 30 percent more than in FY 1990.

- Associated costs to the government were estimated at $1.3 million indicating a benefit to-cost relationship of 8 to 1.

- Each volunteer worked an average of 43 hours; 1 out of 3 were females; 7 percent were over 60 years old; 60 percent were between 18 and 59 years of age; and 33 percent were under 18 years of age.

Hosted Workers

The BLM also recruits "hosted workers" or people who work for the BLM and are paid by another entity. One example of such a program is the Senior Community Service Employment Program, a Federal-State program through which low-income older persons can work for public or community service organizations and be trained on the job while paid minimum wage.

In FY 1991, the BLM's field managers were assisted by 1,753 hosted workers, who served 382,629 hours and accomplished work valued at $4.3 million. Incidental costs to the BLM were estimated at $171,134.

Information Resources Management

The Automated Land and Mineral Record System Modernization Project will bring the BLM into the 21st century with easier access to billions of public lands records.

The BLM's Information Resources Management (IRM) program includes data administration, records administration, mapping sciences, information resource planning and policy, automated data processing (ADP), telecommunications, and information security. The program continues to develop policies, standards and procedures for managing data, spatial data records, and technological tools to assist the efficient management of the BLM's information resources and to improve public land resource management.

Intensive work on the Automated Land and Mineral Record System (ALMRS) Modernization Project continues, as the BLM's field offices focus their efforts on standardizing data, services, and information technology operations to implement the project in FY 1994 and FY 1995.

Over 8,000 microcomputers bureauwide are supporting the BLM's evolving local automation requirements. The need for applying graphics capabilities for processing spatial data continues to increase.

Information access, information security, cost recovery, and electronic records management are a critical part of the BLM's IRM program. With the passage of the Federal Computer Security Act of 1987, the BLM began developing a comprehensive Information Security Program. The program includes identification and protection of the BLM's data from unauthorized access and development of security plans for sensitive systems.

Public Access

BLM policies and procedures on public access issues were developed during FY 1990. Specific records administration policies were issued on categories of information designated as public. These policies also address methods of access under the Freedom of Information Act and through data sharing agreements. The BLM also initiated an ongoing cost recovery project to establish bureauwide rates for providing copies of records in both manual and automated formats. These rates were established in October of 1990 and have been revised and updated on an annual basis.

Records Transition

Records transition is a priority project within the BLM. This is the orderly process for transferring manual, paper, microform and other non-automated records to an automated system. The BLM records transition project will create the framework for designating official record status to the automated records, create sufficient documentation to ensure legal admissibility and establish procedures to ensure fair and equitable use by members of the public. When the records transition planning process is approved for bureauwide application, it will be incorporated into

the BLM Records Administration policies. Electronic records guidance is being developed and will be integrated with the ADP life cycle management process which includes procedures for creation, use, maintenance, transmission, release, preservation, and disposal of records in all forms.

Data Administration
In FY 1991, the BLM continued specific Data Administration policies and guidance. The BLM continued work on the establishment of data elements for all of the resources programs. Other work included the development of Data Administration policies for data integrity, shared data resources, data modeling and BLM's data dictionary. The BLM's data administration policies continue to evolve and will be implemented and evaluated in the following decade.

As part of the BLM's Data Administration strategies, the BLM has been collecting legal land descriptions and legal land status data on land administered by the BLM in the Western States. Using established standards, legal land descriptions were collected in 1990, and legal land status data collection will be completed in early 1992.

Telecommunications
The IRM program will continue to provide BLM field offices with improved computer, telecommunications, and records management capability to assist management and public service.

In telecommunications, the BLM has continued to reduce its subscription to consolidated telephone service provided in major metropolitan areas by the General Services Administration in favor of BLM-owned and maintained systems. This will result in savings in the BLM's offices over the next ten years.

The BLM is automating public land records, replacing hand-drawn plats, some of which date back 200 years.

Automated Land and Mineral Record System
A basic responsibility for the last 200 years has been the maintenance of the land and mineral records for the public lands. These official documents are the basis, in our American system of property rights, for the legal authorizations to use the public lands, including thousands of applications annually for oil and gas leases and rights-of-way. The BLM is now automating access to the information on these records, replacing hand-drawn plats and procedures that in some offices date back to the beginning of the country. Implementing the ALMRS Modernization Project is a major effort, and work continued toward the issuance of a Request for Proposals in FY 1991. The BLM also completed a Master Plan for Automation to tie together all of the automation projects. To prepare key staff for implementing automation, numerous "Automation for Managers" courses have been held.

A prototype system will optically scan land records, including lands won from the British during the American Revolution.

Preserving America's Heritage

The Eastern States Office (ESO), considered the largest land title office in the world, houses the original patents and supporting documents for lands that were part of the original "Public Domain" in 1789. These include lands won from the British during the American Revolution (Ohio, Michigan, Indiana, Illinois, and Wisconsin), lands that were part of the Spanish possessions (Alabama, Mississippi, and Florida) and lands that were purchased from France in 1803 (Louisiana, Arkansas, Missouri, Iowa, and Minnesota). Patents (deeds that transfer land ownership from the U.S. Government to a buyer) and tract books (records showing how, when and to whom title to the public domain passed), dating back to 1790, represent the only record system used by the United States to show original grants on these lands.

In FY 1989, ESO entered into an Interagency Agreement with the Department of Energy, Office of Scientific and Technical Information. With their expertise and a contractor, Science Applications Corporation, they developed a prototype system to optically scan the General Land Office records, which involves storing information on optical discs to allow optimum data retrieval and protection of the original documents. The estimated four-year project, called "Preserving America's Heritage," has been endorsed by the Commission on the Bicentennial of the U.S. Constitution. ESO has now completed three States.

Data Sharing

Coordination efforts are under way with other agencies to enhance data sharing. This will assist with avoiding duplication of efforts and in the development of data standards. The BLM in New Mexico has entered into agreements with McKinley County and Meridian Oil Company to pilot test on-line data access to BLM data. McKinley County is using on-line access to the Farmington Resource Area data base to construct base maps, which are then field checked and supplemented. This data is used to construct accurate "Rural Addressing" information systems needed for emergency services to respond more quickly to calls for help. McKinley County is representative of many counties with heavily fragmented land ownerships patterns. Because collection of taxes, maintenance of roads, law enforcement, etc., are all tied to who owns what parcel of land, cooperation with the BLM is offering the county a relatively inexpensive way to resolve the ownership confusion.

The BLM has been developing software to prepare automated records data for use in ALMRS. This software, when implemented in 1992, will permit Alaska and the Lower 48 States to use common data standards and computer systems for the first time. Costs will be substantially reduced.

General Administration

Management and Productivity Initiatives
Training and Employee Development
Administrative Services
Personnel Management

Management and Productivity Initiatives

The BLM is continuing successful participation in the Department's Productivity Enhancement Fund (PEF) program. Eight new projects were funded in FY 1991. The PEF program encourages managers to experiment with low-cost, innovative methods and techniques to increase efficiency and effectiveness. The new projects are waste oil fueled heater and electronic field data recording for reforestation surveys in Oregon, electronic axle load scales in Nevada, wild horse and burro adoption automation in the Eastern States Office, drainage case backlog elimination in California, use of computers for field gathering of cultural data in Colorado, digital geophysical log automation in New Mexico (Tulsa), and MS DOS field data recorders in Idaho. For the first time since the program's inception, the Department provided matching funds–contributing $106,700 of the projects' total costs of $189,500. To date, 28 BLM projects have been funded through the PEF program.

Activities took place throughout the Bureau in support of Total Quality Management (TQM)–a focus on quality products and services to meet customers needs. Efforts on a national level focused on TQM training as part of the Departmental TQM initiative. Activities at the field level included State-wide efforts and individual office efforts.

Rightsizing Initiated

The BLM initiated a project to rightsize its headquarters office in Washington, D.C. in 1991. An organizational analysis examined the potential for increasing the overall effectiveness of the Washington Office. After considering three alternatives, the Bureau's Management Team decided to transfer certain headquarters positions to existing field organizations. The positions will continue to have responsibility for national-level assignments which do not need to be carried out in Washington, D.C. About 190 positions will ultimately be moved to State Offices on a program-by-program basis. Positions remaining in Washington will carry out essential headquarters functions such as policy making and program oversight, and coordination among various intergovernmental and interest groups.

The BLM encourages managers to experiment with low cost innovative ways to increase efficiency. Eight such projects were funded in 1991.

In addition, a limited number of organizational changes to complement the rightsizing effort were given preliminary endorsement.

Training and Employee Development

The BLM continues to have the premier training and employee development program in the Department of the Interior. In FY 1991, the BLM devoted approximately $8 million and 100 FTE's to the training effort. In the BLM, training and employee development are decentralized operations. The major offices are:

The BLM continues to have the premier training and development program in the Interior Department.

- Office of Employee Development, Washington, D.C., headquarters;
- Phoenix Training Center (PTC), Arizona;
- Division of Training at the Boise Interagency Fire Center (BIFC), Idaho;
- Service Center (SC), Colorado;
- State Training Offices.

The BLM enhances the careers of its employees by encouraging self-development and on-the-job training, as well as providing formal training in the pursuit of professional and administrative careers. To this end, the BLM has developed a resource guide, called the Careers Program, to inform supervisors and employees of the many opportunities that are available, such as:

- New Employee Orientation
- Employee Excellence Seminar
- Director's Career Enhancement Program
- Women's Executive Leadership Program
- Supervisory Training
- Management and Leadership Workshop
- Advanced Leadership Workshop
- Senior Executive Service Candidate Development Program
- Senior Executive Service Forums
- Advanced Manager Program
- Manager Development Program
- Programs offered by the Office of Personnel Management's (OPM) Management Development Centers

In addition to the Careers Program, there are training and employee development programs geared to employees in the beginning and early stages of their careers. These programs are designed to build an understanding of and commitment to the BLM's mission and the employee's role in that mission. Programs focus on identifying and developing both a reserve of technical expertise and a body of high potential future managers and leaders.

The training centers and offices conduct a variety of technical training programs designed to help the BLM more effectively carry out its mission. Typically, these technical programs are delivered in or by the PTC, BIFC, SC and the State training offices.

The Office of Employee Development in Washington coordinates and provides policy guidance and assistance for BLM-operated training programs and officers. The Washington, D.C., office also provides employee development services for the headquarters office.

Administrative Services

During FY 1991, the BLM spent $154 million for goods and services. This includes approximately $93 million for 2,427 contract actions and $61 million for 75,000 small purchases of $25,000 or less. In addition, the BLM continues to maximize the use of U.S. Government Visa cards for small purchases. BLM employees made purchases of over $4 million using over 1,200 cards. This technique reduces paperwork by eliminating the preparation and distribution of purchase orders, permits over-the-counter transactions, and guarantees fast payment.

Procurement

The BLM exceeded or substantially exceeded all of its goals in various socioeconomic procurement programs. Its outstanding achievements in this area earned the BLM the "Interior Unit Award for Excellence of Service." The BLM is participating in the development of the Interior Department Electronic Acquisition System (IDEAS). The Request for Proposals (RFP) for IDEAS has been issued to acquire commercial

software which is envisioned to automate all procurement operations, from requisition to close-out; produce necessary reports; and interface financial management and property systems. The software is expected to be used by all agencies and offices within the Department.

The RFP states that the BLM implementation of IDEAS is scheduled for FY 1994, but because of budgetary constraints, the BLM may need to delay implementation until FY 1995. In the interim, the BLM will continue to use the commercial "off-the-shelf" (COTS) software known as "Preprinted Forms Systems" (PPFS) for purchasing and reporting, and "FARA" for solicitation and contract document preparation.

The BLM also issued a fully competitive RFP on May 22, 1991, for a Bureauwide Automated Land and Mineral Records System (ALMRS)/Modernization Project to increase efficiency and modernize operations. The contract, which is expected to be awarded at the end of FY 1992, will provide Automated Data Processing (ADP) hardware, COS software including associated operating system software; and Database Management System (DBMS) and Geographic Information System (GIS) capabilities. Prior to issuing the RFP, the BLM carefully evaluated input from industry and users who responded to a Request for Information on the topic.

The BLM continues to successfully manage its delegation of space leasing authority from the GSA. The BLM procurement program also is supporting major BLM program contracts and cooperative agreements ranging from Hazardous Materials Management program studies to Global Change Research and Indian Self-Determination Act contracts for cadastral surveys in Alaska.

Property Management

The BLM continues to operate the Departmental Fleet Management System for the Department, providing management utilization reports to the Department. The warehouse inventory management system for fire warehousing is being implemented in FY 1991. The BLM's system for electronic screening and reporting of excess personal property has been expanded to allow other agencies in the Department to use it on a cost reimbursable basis. This system meets a need identified by the Department with minimal cost. The BLM continues to report BLM owned and leased real property holdings to the GSA using the automated FIRM system developed by GSA. The BLM is also participating in the Alternative Fuels Program being developed in response to Executive Order.

Retrofitted vehicle using natural gas.

The BLM is participating in a new alternative fuels program to promote energy conservation.

Uniforms

The BLM's uniform program was started in 1988 as an outgrowth of its ranger uniform program started in 1975. Uniforms provide easy identification to the public of BLM employees and volunteers. This helps provide authority, enlist the public's cooperation, and project a positive image.

The number of employees in uniform increased 7.3 percent, from 5,025 in 1990 to 5,392 in 1991–A total of 4,016 males and 1,376 females in uniform.

The BLM has dress, field, and work uniforms. New components added to the program this year included a polo shirt, T-shirt, hiking shorts, field pants, boonie hat, and a windbreaker. Except for the windbreaker, all new components are made of 100 percent cotton.

Directives/Records Management

The BLM is the largest single producer, consumer, and disseminator of information on multiple use management of public lands in the world. Consequently, it is inherent that the BLM manage information effectively and economically to meet the great public demand.

In FY 1991, the BLM reorganized its Information Resources Management

The BLM maintains more information on public lands than any other agency in the world.

(IRM) functions which included the separation of some records management functions. This brought about a fresh look at the functions, and identified a need for improvement. Thus, a study has been proposed to identify how to improve the overall leadership, management, and implementation of the program.

The reorganization combined some records management functions with the management of the BLM's directives. This combination highlighted the need for the BLM's program directives to include providing guidance for individual program recordkeeping requirements. Action began in 1991 to ensure records management personnel work with program employees to meet this new requirement.

Additionally in FY 1991, a draft Statement of Need and Project Charter was proposed to automate an inventory of the BLM records holdings. The purpose of the inventory is to identify what records are created, where they are maintained and by whom, the volume and frequency of use, current media, access restrictions, and disposal dates/activities. The inventory will be used to analyze the economic and efficient management and use of BLM information and will form the basis for recommending changes as needed.

In FY 1990, the BLM began a field test to automate the formatting of permanent directives initiated in the Washington Office. Although the field test was successful and recommended for implementation, funding was not available in FY 1991. Implementation is now scheduled for FY 1992.

Printing Study
The Publications Standards Handbook was developed to give BLM publications a standard recognizable identity for the public. It was field tested for 18 months; comments have been received and are being incorporated. Once the handbook is finalized, it will become a part of the directives system.

Publications Indexing Studies
A study has been initiated to address the need for an automated indexing system to access current in stock. BLM publications. This would be used extensively in the public rooms and would speed accessibility to publications throughout all offices. A preliminary report has been issued and an expanded study team will begin inventory and systems analyses.

Personnel Management

The BLM's Division of Personnel in the Headquarters Office concentrated much of its efforts during FY 1991 in developing Bureau-wide personnel policy and procedures in the areas of personnel security management, further delegation of personnel management authority and recruitment, classification, and preliminary work on Washington Office "rightsizing."

The Security Management program was revised and strengthened by making position sensitivity determinations on all positions, and clarifying the types of background investigations required; conducting a workshop on adjudication, and employing for the first time a full-time personnel security specialist. Additional delegations in the areas of recruitment and selection, position classification, and security were implemented. Standardized position descriptions were developed for firefighter and ranger positions.

During FY 1991, the BLM had approximately 10,000 employees.

Equal Employment Opportunity (EEO)

The BLM administered a comprehensive EEO program in 1991. Emphasis was placed on expanding affirmative employment efforts and targeted outreach initiatives. In addition, managers and staff were provided guidance and technical assistance in resolving conflict situations at the lowest possible level.

The BLM maintained a variety of special emphasis activities, including the Black Employment Program, the Hispanic Employment Program, the Federal Women's Program, and the Resource Apprenticeship Program for Students designed to acquaint youth at risk with opportunities in natural resource management. As a result of such efforts, 275 women and minority employees were added to the BLM's permanent workforce.

Financial Management

Financial Management
Appropriations and Expenditures
BLM Funding
Payments in Lieu of Taxes
Revenues and Receipts

The BLM provides payments to local governments where BLM resources are located.

The BLM's Division of Finance in the Washington Office, and its operating counterpart at the Denver Service Center, provide accounting and financial management services for all BLM-appropriated funds. This includes one annual and numerous permanent appropriations that provide funds to States and local governments in which Federal land resources are located, either as payments in lieu of taxes, or as shared revenues from the sale, leasing, and disposition of resource commodities. In addition, the BLM is a primary collector of Federal revenues for use of resources on public lands.

Chief Financial Officers Act
In FY 1991, the BLM began implementation of the Chief Financial Officers Act of 1990, designed to improve financial management information and performance by placing responsibility for all financial activities on a Chief Financial Officer within each Federal agency. Areas of emphasis include program and administrative financial management systems to improve the quality of program information, and preparation of annual audited financial reports for the Office of Management and Budget and Congress. These reports will include measures of program performance. Other areas of emphasis are activities to improve the recruitment, retention and skills of financial management personnel and more frequent reviews of services provided for which the costs could be recovered. During FY 1991, efforts were concentrated on learning the Act's requirements, preparing plans for implementation, and working on a financial report on the FY 1991 program.

Federal Financial System
The BLM implemented the Federal Financial System(FFS), the principal financial management system of the BLM, in October, 1990. The system is part of a government-wide effort to improve and standardize financial systems, operations and information throughout Federal agencies. FFS operated successfully throughout FY 1991 with continuing improvements. Efforts concentrated on improving reporting capabilities and access to the system for non-standard reports.

Financial Report and Statements
The BLM prepared a financial report and statements for FY 1991 as required by the Chief Financial Officers Act. The

The BLM is implementing a new program designed to improve and standardize financial systems throughout the government.

report is currently being audited by the Office of Inspector General.

Credit Card Systems
Expansion of the credit card collection system begun in FY 1990 continued throughout 1991. This program allows the public to pay amounts owed the BLM through use of VISA or Mastercard. The program was expanded to additional offices in 1991, and to provide for payment of grazing bills by credit card.

The BLM collected about $230 million in Federal revenues in 1991.

Revenues and Receipts
The BLM is a primary collector of Federal revenues. Gross receipts from the lease, use, and sale of public land and resources totaled approximately $230 million in FY 1991. Of this amount, about $105 million will be returned to the States; $22 million was transferred to the Reclamation Fund; $10 million to the Range Improvement Fund; and the remaining $93 million was transferred into the general fund of the United States Treasury.

State and Local Shares
The BLM's most direct fiscal impact upon States that include public land is through revenue sharing and other direct payments. In the period from 1976 through 1991, State and local governments received nearly $4.5 billion from the Department of the Interior as their share of revenues collected from the lease or sale of public land resources, and as in-lieu payments for tax-exempt lands.

Revenue Sharing
Taylor Grazing Act revenues are distributed according to the type of land generating them. Of the fees collected from livestock grazing districts, 12.5 percent are distributed to the State for expenditure by the legislative branch to benefit the counties generating these grazing receipts. Grazing revenues generated on public land outside the grazing districts are shared equally with the State. State legislatures have the authority to expand the funds to benefit the counties where grazing monies are collected.

Land sale revenues generated in Nevada under the Santini-Burton Act are collected and distributed on an annual basis. This Act authorizes the allocation of ten percent of gross revenues back to Clark County or the municipality in which these revenues are generated, and five percent to the State of Nevada. The remaining revenues are deposited in the Land and Water Conservation Fund for the purchase of environmentally sensitive land in the Lake Tahoe Basin.

Payments in Lieu of Taxes
Local government units within Western States are the principal beneficiaries of the 1976 Payments in Lieu of Taxes Act. This law was enacted to provide federal payments to those areas where large portions of land are in Federal ownership and, therefore, are exempt from local property taxes. Serving as a supplement to revenue sharing funds, payments in lieu of taxes are made directly to local governments and may be used for any governmental purpose.

Lands eligible for payments in lieu of taxes are Federally owned lands in the National Forest, National Park, and National Wildlife Refuge Systems; lands administered by the BLM; land dedicated to the use of Federal water resource development; dredge disposal areas under the jurisdiction of the Army Corps of Engineers; inactive and semiactive Army installations; and certain land donated to the United States Government. The Act specifically prohibits payments for land (but not certain donated land) that was tax exempt before being acquired from State or local government.

Since payments in lieu of taxes started in 1977, more than $1 billion has been paid to local governments; about $100 million of that amount was paid in FY 1991.

Appropriations and Expenditures

BLM programs are funded through six major operating appropriations, several permanent and trust appropriations, and reimbursements from other Federal agencies for work performed on their behalf. In addition, the BLM budget includes one annual appropriation and numerous permanent appropriations that provide funds to State and local governments in which Federal lands and resources are located either as payments in-lieu of taxes or as shared revenues from the sale, leasing and disposition of resource commodities.

BLM Funding

The BLM's overall funding for the most recent five Fiscal Years (FY) is as follows:

BLM FUNDING-FY 1988-1992

	FY 1988 Actual	*FY 1989 Actual*	*FY 1990 Actual*	*FY 1991 Actual*	*FY 1992 Enacted*
			(In Millions of Dollars)		
BLM Operating Appropriations	578.3 (1)	632.1	725.9	722.5	798.4
Payments-in-Lieu of Taxes	105.0	105.0	105.0	104.4	103.7
Permanent Payments to States	156.4	127.0	120.8	118.5	104.2
Other Miscellaneous	7.3	7.5	169.6 (2)	19.6	17.0
Total	**$ 847.0**	**871.6**	**1,121.4**	**965.0**	**1,023.3**

(1) The FY 1990, FY 1991, and FY 1992 Operating Appropriations amounts include only BLM's firefighting program.

(2) The FY 1990 Other Miscellaneous category includes $150.8 million appropriated as permanent budget authority for the Cook Inlet Region, Inc. (CIRI), Property Account, established to settle CIRI's land entitlement issues in Alaska. BLM is responsible for monitoring and administering this account.

FUNDING, OBLIGATIONS AND WORK-YEARS BY PROGRAM - FY 1990-1992

Enacted appropriations, actual obligations and work-year data on a program-by-program basis for BLM's principal operating accounts for 1990 and 1991 actual, and 1992 enacted to date are as follows:

Management of Lands and Resources (MLR)

PROGRAM		FY 1990 *Actual* (1)	FY 1991 *Actual* (2)	FY 1992 *Enacted* (3)
Energy and Minerals (includes Oil & Gas, Coal, Mining Law Administration, etc.)				
Appropriation	($000's)	70,441	74,452	80,354
Obligations	($000's)	69,828	75,163	N.A.
Work Years		1,479	1,400	N.A.
Lands, Realty and Rights-of-Way				
Appropriation	($000's)	36,067	39,187	40,516
Obligations	($000's)	35,782	39,185	N.A.
Work Years		757	764	N.A.
Forest Management (except Western Oregon)				
Appropriation	($000's)	6,581	6,753	7,080
Obligations	($000's)	6,450	6,720	N.A.
Work Years		127	118	N.A.
Wild Horse and Burro Management				
Appropriation	($000's)	13,408	14,341	14,604
Obligations	($000's)	13,335	14,278	N.A.
Work Years		152	147	N.A.
Rangeland Management				
Appropriation	($000's)	35,296	40,113	40,853
Obligations	($000's)	34,935	40,086	N.A.
Work Years		731	760	N.A.
Soil, Water and Air Management				
Appropriation	($000's)	14,935	17,809	18,235
Obligations	($000's)	14,697	17,794	N.A.
Work Years		244	237	N.A.
Wildlife Habitat & Fisheries Management				
Appropriation	($000's)	22,607	31,113	34,137
Obligations	($000's)	22,486	31,545	N.A.
Work Years		395	446	N.A.

FUNDING, OBLIGATIONS AND WORK YEARS BY PROGRAM FY 1990 - 1992

Management of Lands and Resources *(continued)*

PROGRAM		FY 1990 *Actual* (1)	FY 1991 *Actual* (2)	FY 1992 *Enacted* (3)
Recreation Management (includes Recreation, Cultural, & Wilderness Resource Management)				
Appropriation	($000's)	28,348	39,447	45,075
Obligations	($000's)	27,539	40,568	N.A.
Work Years		541	652	N.A.
Resource Management Planning				
Appropriation	($000's)	8,872	9,451	9,705
Obligations	($000's)	8,665	9,450	N.A.
Work Years		159	162	N.A.
Information & Resource Data Management (includes Information Systems Operation & Maintenance, ALMRS, & Resource Data Acquisition)				
Appropriation	($000's)	43,423	43,015	46,048
Obligations	($000's)	44,351	47,536	N.A.
Work Years		620	623	N.A.
Resource Protection & Maintenance (includes Facilities Maintenance, Cadastral Surveys, Resource Protection/Law Enforcement, & Hazardous Materials Mgmt.)				
Appropriation	($000's)	66,210	84,378	91,576
Obligations	($000's)	64,413	83,526	N.A.
Work Years		803	876	N.A.
General Administration				
Appropriation	($000's)	89,726	97,426	102,584
Obligations	($000's)	89,121	97,310	N.A.
Work Years		1,046	1,020	N.A.
Emergency Operations (3) (includes Grasshopper and Mormon Cricket Control, & Emergency Damage Repair)				
Appropriation	($000's)	N.A.	N.A.	N.A.
Obligations	($000's)	N.A.	305	N.A.
Work Years		4	4	N.A.
MANAGEMENT OF LANDS AND RESOURCES - TOTALS				
Appropriation	**($000's)**	435,914	497,485	532,149
Obligations	**($000's)**	431,602	503,466	N.A.
Work Years		7,058	7,209	N.A.

(1) FY 1990 Actual column reflects reductions resulting from sequestration under the Deficit Control Act (Gramm-Rudman).

(2) FY 1991 Actual Appropriation includes a 0.524 percent reduction for each activity which was mandated by the FY 1991 Interior and Related Agencies Appropriations Act (P.L.\101-512).

(3) FY 1992 Enacted Appropriation includes a 1.26 percent reduction for each activity which was mandated by the FY 1992 Interior and Related Agencies Appropriations Act (P.L.\102-154).

FUNDING, OBLIGATIONS AND WORK YEARS BY PROGRAM FY 1990- 1992

Department of the Interior Fire Protection [4]

PROGRAM		FY 1990 *Actual* [1]	FY 1991 *Actual* [2]	FY 1992 *Enacted* [3]
Fire Protection - BLM (Only)				
Fire Management and Presuppression				
Appropriation	($000's)	51,598	52,965	65,864
Obligations	($000's)	47,682	54,302	N.A.
Work Years		777	912	N.A.
Fire Protection Department Wide (including BLM, NPS, FWS, and BIA)				
Appropriation	($000's)	98,921	101,035	120,473
Obligations	($000's)	90,179	100,136	N.A.
Work Years		1,437	1,772	N.A.

Emergency Department of the Interior Fire Fighting Fund [4]

Emergency Operations - BLM (Only)				
Appropriation	($000's)	116,435	47,315	60,947
Obligations	($000's)	106,923	48,668	N.A.
Work Years		314	190	N.A.
Emergency Operations Department (including BLM, NPS, FWS, and BIA)				
Appropriation	($000's)			
Obligations	($000's)	166,521	66,843	99,598
Work Years		147,536	79,001	N.A.
		525	339	N.A.
Repayment of Prior Year Firefighting Costs [5]				
Appropriation	($000's)			
		221,046	N.A.	N.A.
Emergency Transfers [6]				
Transferred				
			+5,000	–5,000

(1) FY 1990 Actual column reflects reductions resulting from sequestration under the Deficit Control Act (Gramm-Rudman).

(2) FY 1991 Actual column includes a 0.524 % reduction for each activity which was mandated by the FY 1991 Interior and Related Agencies Appropriations Act (P.L.\101-512).

(3) In FY 1992 Enacted Appropriation includes a 1.26 % reduction for each activity which was mandated by the FY 1992 Interior and Related Agencies Appropriation Act (P.L.\102-154).

(4) In FY 1990, a separate appropriation account was established to fund the operation of the Interior Department's entire fire program. IN FY 1992, Congress separated the Firefignting Fund into two separate appropriations with Fire Protection in one and Emergency Firefighting in the other. The accounts provide funding for the BLM, the National Park Service, the Fish and Wildlife Service, and the Bureau of Indian Affairs. These accounts are administered by the BLM. Prior to FY 1992, the Emergency Operations program was included in the combined firefighting account. The FY 1990 and 1991 appropriations and obligations are shown here for comparability purposes.

(5) The FY 1990 appropriation included $221,046,000 to repay funds which were borrowed from other Interior accounts to cover FY 1989 firefighting costs.

(6) In FY 1991, $5,000,000 was borrowed from other accounts to fund emergency operations. This $5,000,000 was consequently repaid in FY 1992.

Payment of Bureau of Land Management Receipts to States, Fiscal Year 1991 (Actual)

State	Mineral Leases and Permits(1)	Grazing Receipts Grazing Districts Outside	Grazing Receipts Grazing Districts Inside	Sale of Public Land and Materials	Other	Total
Alaska	367,378	----	----	891	----	368,269
Arizona	10,756	136,905	72,368	8,002	----	228,031
California	38,587	75,357	13,938	69,001	----	196,883
Colorado	44,986	45,052	109,982	9,104	----	209,124
Florida	----	----	----	190	----	190
Idaho	8,639	32,070	251,302	48,054	----	340,065
Kansas	----	100	----	----	----	100
Minnesota	----	----	----	16	----	16
Missouri	----	----	----	4	----	4
Montana	7,630	142,709	160,690	14,725	381,572	707,326
Nebraska	----	733	----	----	----	733
Nevada	8,275	21,385	415,067	2,058,015 (2)	----	2,502,742
New Mexico	143,292	219,445	324,286	21,438	9,806	718,267
North Dakota	450	8,105	----	1,292	1,629	11,476
Oklahoma	10,275 (3)	95	----	----	----	10,370
Oregon	558	44,335	152,630	707,174	69,682,629 (4)	70,587,326
South Dakota	----	79,681	----	6	1,140	80,827
Utah	242,062	----	168,095	26,392	----	436,549
Washington	9	23,711	----	2,782	----	26,502
Wisconsin	----	----	----	1,128	----	1,128
Wyoming	137,801	443,405	239,494	20,219	255	841,174
TOTAL	**1,020,698**	**1,273,088**	**1,907,852**	**2,988,433**	**70,077,031**	**77,267,102**

(1) The BLM continues to make payments on receipts from the National Petroleum Reserve - Alaska and other minor categories of mineral receipts even though Minerals Management Service has primary responsibility for mineral receipts collections.

(2) Includes $1,956,486 for Burton-Santini Land Sales.

(3) Includes $10,187 for Oklahoma Royalties.

(4) Includes $69.1 million from O&C Grant Lands and $593,143 from Coos Bay Wagon Road timber receipts.

SUMMARY OF PAYMENTS IN LIEU OF TAXES BY STATE

Payment	FY 1991
Alabama	$116,762
Alaska	4,640,315
Arizona	8,093,450
Arkansas	972,824
California	10,191,402
Colorado	6,704,831
Connecticut	17,781
Delaware	9,576
Dist. of Columbia	5,283
Florida	1,043,616
Georgia	757,574
Guam	1,644
Hawaii	36,263
Idaho	7,264,717
Illinois	319,084
Indiana	158,421
Iowa	127,815
Kansas	338,096
Kentucky	598,553
Louisiana	161,614
Maine	87,762
Maryland	39,425
Massachusetts	52,465
Michigan	1,122,556
Minnesota	816,638
Mississippi	442,888
Missouri	854,383
Montana	8,002,820
Nebraska	340,588
Nevada	6,709,372
New Hampshire	213,840
New Jersey	40,842
New Mexico	10,463,507
New York	41,243
North Carolina	1,271,999
North Dakota	558,847
Ohio	167,669
Oklahoma	755,893
Oregon	2,845,197
Pennsylvania	208,938
Puerto Rico	7,394
South Carolina	130,632
South Dakota	1,335,409
Tennessee	457,779
Texas	1,352,004
Utah	8,966,332
Vermont	231,253
Virgin Islands	10,929
Virginia	1,217,483
Washington	1,402,611
West Virginia	925,109
Wisconsin	424,886
Wyoming	7,034,067
Total	**$100,092,381**

GLOSSARY OF ACRONYMS

ACEC	Areas of Critical Environmental Concern
ADP	Automated Data Processing
ALMRS	Automated Land and Mineral Record System
ANGTS	Alaska Natural Gas Transportation System
APHIS	Animal and Plant Health Inspection Service
ARPA	Archaeological Resources Protection Act of 1979
ASAP	Automated System for Acquisition Processing
AUM	Animal Unit Month
BIA	Bureau of Indian Affairs
BIFC	Boise Interagency Fire Center
BLM	Bureau of Land Management
CFR	Code of Federal Regulations
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESO	Eastern States Office
ESP	Experimental Stewardship Program
FFS	Federal Financial System
FLPMA	Federal Land Policy and Management Act
FTE	Full-time equivalency
FWS	Fish and Wildlife Service
FY	Fiscal Year
GAO	General Accounting Office
GCRP	Global Change Research Program
GSA	General Services Administration
HCA	Habitat Conservation Area
I&E	Inspection and Enforcement
IDEAS	Interior Department Electronic Acquisition System
IRM	Information Resources Management
ISC	Interagency Scientific Committee
LMU	Logical Mining Units
LWCF	Land and Water Conservation Fund
MLR	Management of Lands and Resources
MMS	Minerals Management Service
MOU	Memorandum of Understanding
MW	Megawatts
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1966
NICC	National Interagency Coordination Center
NPS	National Park Service
OHV	Off-Highway Vehicle
OMB	Office of Management and Budget
PEF	Productivity Enhancement Fund
PPFS	Preprinted Forms System
PRLA	Preference Right Lease Applications
PTC	Phoenix Training Center
PV	Production Verification
R&PP	Recreation and public purposes
RMP	Resource Management Plan
ROW's	Rights-of-way
SC	Service Center
SMAT	Solid Minerals Assistance Teams
TAMP	Texas Acquired Mineral Project
TAPS	Trans-Alaska Pipeline System
TQM	Total Quality Management
TRRC	Texas Railroad Commission
WSA	Wilderness Study Area

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